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EXAMINING FREIGHT RAIL SAFETY

(117–52)

REMOTE HEARING

BEFORE THE

SUBCOMMITTEE ON RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS

OF THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTEENTH CONGRESS

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JUNE 9, 2022

SUMMARY OF SUBJECT MATTER

TO: Members, Subcommittee on Railroads, Pipelines, and Hazardous Materials
FROM: Staff, Subcommittee on Railroads, Pipelines, and Hazardous Materials
RE: Subcommittee Hearing on "Examining Freight Rail Safety"

PURPOSE

The Subcommittee on Railroads, Pipelines, and Hazardous Materials will meet on Tuesday, June 14, 2022, at 10:00 a.m. ET in 2167 Rayburn House Office Building and via Zoom to hold a hearing titled "Examining Freight Rail Safety." The purpose of this hearing is to hear from government and stakeholder witnesses about the state of freight rail safety and issues pertinent to keeping rail operations, rail workers, and communities safe. The Subcommittee will receive testimony from the Federal Railroad Administration; the National Transportation Safety Board; the Brotherhood of Maintenance of Way Employes Division; Brotherhood of Railway Carmen Division; retired transportation policy consultant; Loram Technologies, Inc.; Norfolk Southern Corporation and Association of American Railroads; and Sheet Metal, Air, Rail Transportation–Transportation Division.

BACKGROUND

I. FEDERAL RAILROAD ADMINISTRATION

The Federal Railroad Administration (FRA) is responsible for administering the federal rail safety program.[1] FRA has the authority to issue regulations and orders pertaining to rail safety and to issue civil and criminal penalties to enforce those regulations and orders.[2]

FRA executes its railroad safety responsibilities through various skilled staff. FRA headquarters staff include technical experts who manage the mission critical programs, provide technical oversight and management of field personnel, and support development of safety standards and regulations.[3] The agency relies on its field presence to monitor compliance with federally mandated standards, which includes approximately 350 railroad safety inspectors covering six safety disciplines and more than 100 specialists, engineers, analysts, and managers who work in the field.[4] FRA further relies on 202 state safety inspectors employed by 33 states by agreement to perform compliance inspections and additional investigative and surveillance activities.[5]

In addition to FRA's field-based specialists and inspectors, FRA's Office of Railroad Safety includes nine Safety Management Teams (SMT) located across the coun-

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[1] Subtitle V of Title 49, United States Code.
[2] *Id*.
[3] Federal Railroad Administration, Fiscal Year 2023 Budget Estimates, Page 46.
[4] The six disciplines include: operating practices; motive power and equipment; signal and train control; track; hazardous materials; and grade crossing safety. FY 2023 Budget Estimates, Page 42: https://www.transportation.gov/sites/dot.gov/files/2022-04/FRA__Budget__Estimates__FY23.pdf
[5] Communication from Federal Railroad Administration to Subcommittee Staff, and https://railroads.dot.gov/divisions/partnerships-programs/state-rail-safety-participation.

try.[6] Created in June 2020 during a reorganization of the office, the SMTs are responsible for oversight and engagement with a single railroad or a class of railroads to monitor risks at a railroad-specific system-wide level rather than by region.[7]

II. NATIONAL TRANSPORTATION SAFETY BOARD

The National Transportation Safety Board (NTSB) is an independent federal agency charged with investigating significant accidents in railroad and other transportation modes.[8] Staff working in the Railroad Division of the Office of Railroad, Pipeline and Hazardous Materials Investigations investigate accidents and incidents involving passenger and freight railroads, commuter rail transit systems, and other fixed guideway systems.[9] The division also assesses selected railroad safety issues, often based on a set of accident investigations.[10] Special studies may focus on analyses of regulations, railroad safety programs or procedures, or audit reviews of management and operations practices.[11] The NTSB also coordinates the resources of the federal government and other organizations to assist victims and their family members impacted by transportation disasters.[12]

The NTSB's 2021–2022 Most Wanted List of Transportation Safety Improvements ("Most Wanted List") includes a call to improve the safety of rail workers.[13] The Most Wanted List highlights recurring safety issues impacting roadway workers in accident investigations such as concerns for continued use of train approach warning, the need for proper training and job briefings, access to necessary protective equipment, and work schedules and limitations based on science to prevent fatigued workers from working overtime.[14] The Most Wanted List also calls for protection of operating crews and mechanical workers through the use of buffer cars.[15]

III. SAFETY DATA

Railroads must regularly report to FRA on safety events occurring in their systems that meet certain thresholds specified in FRA regulations.[16] FRA uses the information concerning hazards and risks to carry out its regulatory responsibilities, and for determining comparative trends of railroad safety and to develop hazard elimination and risk reduction programs that focus on preventing railroad injuries and accidents.[17] Accuracy of such reported information is critical.[18] FRA publishes on its website railroad reports and safety data. Below is publicly reported data on Class I railroads for the decade of 2013 to 2022.[19]

Train accidents (not at grade crossings):

The number and rate of train accidents have fluctuated for the last decade. The number of accidents include a low of 1,229 accidents (2021) and a high of 1,592 accidents (2018). The rate of accidents per million train miles include a low of 2.415 accidents per million train miles (2013), and a high of 3.019 accidents per million train miles (2019).[20] This compares to the previous decade (2003–2012) annual train accidents which measured at a low of 1,390 (2012) and a high of 2,778 (2004), and rate of train accidents per million train miles at a low of 2.402 (2012) and a high of 4.372 (2004).[21]

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[6] Safety Management Teams, https://railroads.dot.gov/divisions/regional-offices/safety-management-teams

[7] *Id.*

[8] 49 USC 1131.

[9] National Transportation Safety Board Fiscal Year 2023 Budget Request, Page 66.

[10] *Id.*

[11] *Id.*

[12] 49 USC 1139.

[13] Improve Rail Worker Safety, 2021–2022 Most Wanted List, National Transportation Safety Board https://www.ntsb.gov/Advocacy/mwl/Pages/mwl-21-22/mwl-rph-02.aspx

[14] *Id.*

[15] *Id.*

[16] 49 CFR Part 225.

[17] 49 CFR 225.1

[18] 49 CFR 225.33 regulates Internal Control Plans.

[19] Data includes only Class I railroads, excluding Amtrak. Ten Year Accident/Incident Overview 1.12, January–December 2022, retrieved June 3, 2022, *Available at* https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/TenYearAccidentIncidentOverview.aspx.

[20] Accidents per million train miles is an FRA standard measurement.

[21] Data includes only Class I railroads, excluding Amtrak. Ten Year Accident/Incident Overview 1.12, January–December 2012, retrieved April 29, 2022. *Available at* https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/TenYearAccidentIncidentOverview.aspx.

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TRAIN ACCIDENTS (Not at Grade-Crossings)	1,428	1,486	1,503	1,346	1,414	1,592	1,550	1,298	1,229	335
..... RATE of Train Accidents per mil train miles	2.415	2.450	2.581	2.531	2.593	2.900	3.019	2.959	2.815	3.149
--- Train accident deaths	2	2	.	3	1	4	.	4	1	.
--- Train accident injuries	66	47	260	31	43	49	27	29	29	5

Train accidents (not at grade crossings) by cause:

Railroads assign causes to reportable accidents. Human factor and track remain the leading causes of train accidents, followed by miscellaneous. This is consistent with the previous decade.[22]

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
--- Human factor caused	565	599	592	517	557	609	662	566	535	162
--- Track caused	406	386	401	371	320	399	375	283	266	59
--- Motive power/equipment caused	182	201	218	211	212	243	216	184	168	53
--- Signal caused, all track types	50	43	49	37	44	52	39	40	22	5
------- Signal caused, main line track	1	4	3	1	2	2	2	1	1	
--- Miscellaneous caused	225	257	245	210	281	291	258	225	240	56

Highway-rail grade crossing incidents:

The number of highway-rail grade crossing incidents ranged from 1,386 (2020) to 1,709 (2014); the rate of such incidents per million train miles includes a low of 2.627 (2014) and high of 3.633 (2021).

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
HIGHWAY-RAIL INCIDENTS	1,553	1,709	1,540	1,466	1,519	1,613	1,553	1,386	1,586	364
RATE of Highway-rail incidents per mil train miles	2.627	2.818	2.644	2.757	2.785	2.938	3.024	3.160	3.633	3.422
--- Highway-rail incidents deaths	146	188	147	153	155	161	168	129	156	38
--- Highway-rail incidents injuries	676	800	833	548	614	556	508	476	483	114

Employee on-duty cases (injury, illness, and fatalties):

The number of employee on-duty deaths ranged from 6 (2016, 2019, 2020) to 9 (2013, 2017, 2018, 2021).

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
--- Employee on duty deaths	9	7	8	6	9	9	6	6	9	1
--- Nonfatal EOD injuries	1,892	1,901	1,776	1,579	1,671	1,587	1,518	1,238	1,190	293
--- Nonfatal EOD illnesses	45	50	46	34	31	33	37	17	8	
--- Total employee on duty cases	1,946	1,958	1,830	1,619	1,711	1,629	1,561	1,261	1,197	294
--- Employee hours worked	322,927,569	339,567,807	332,121,716	291,322,578	286,845,809	290,979,542	270,382,999	229,073,974	223,664,066	55,734,926
RATE of Employees on duty per 200K hours	1.205	1.153	1.102	1.111	1.193	1.123	1.155	1.101	1.070	1.055

Accidents in yards:

In yards, switching is the process of putting cars in a specific order. The total number of yard switching miles has decreased over the decade, but the number of accidents on yard track has fluctuated and the rate of yard accidents per yard switching miles has increased.[23]

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
--- Yard switching miles	69,962,072	71,657,465	70,456,273	62,014,747	62,075,700	61,643,218	57,942,142	49,010,533	47,868,792	11,674,057
--- Accidents on yard track	829	899	953	801	873	1,017	974	838	798	227
..... RATE of yard accidents / yard switching miles	11.849	12.548	13.526	12.916	14.063	16.498	16.810	17.098	16.671	19.445

IV. Safety Issues

Fatigue:

Research has shown that various conditions can affect fatigue such as sleep loss, workload, stress, monotony, workplace ergonomics, age, health, medications, noise, and circadian disruption.[24] Rapid changes in the circadian pattern of sleep and

[22] *Id.*

[23] Yard accidents per yard switching miles is an FRA standard measurement.

[24] Citations for research related to fatigue can be found in Federal Railroad Administration, Notice of Proposed Rulemaking, Fatigue Risk Management Programs for Certain Passenger and

Continued

wakefulness disrupt many physiological functions, and such disruptions may impair human performance and cause a general feeling of debility until realignment is achieved.[25] Symptoms of fatigue include, but are not limited to, falling asleep, increased reaction time, loss of attentional capacity, and decline of short-term and working memory function which may impair performance, increase error, and increase accident risk.[26]

FRA research has established that the probability of rail accidents increases as fatigue increases.[27] Between 2000 and 2020, the NTSB conducted 11 major investigations of accidents involving railroads subject to FRA jurisdiction in which fatigue was identified as the probable or a contributing cause of the accident.[28]

Congress and the FRA require railroads to manage their employees' fatigue associated with railroad operations through hours of service (HOS) limitations and rest requirements.[29] HOS limitations are generally based on the assumption that fatigue simply increases as time passes.[30] This does not account for factors such as sleep loss, amount of sleep, circadian rhythms, sleep quality, and the effects of the type of task being performed on the resulting level of fatigue.[31] Additionally, not all railroad workers are covered by HOS protections; ordinarily HOS do not apply to maintenance-of-way employees, carmen, or yardmasters.[32]

As part of the Rail Safety Improvement Act of 2008, Congress required that by 2012 FRA require the Class I railroads, railroad carriers providing intercity or commuter rail passenger transportation, and railroad carriers that have inadequate safety performance, develop fatigue management plans (as part of safety risk reduction programs) to reduce the fatigue experienced by safety-related railroad employees and to reduce the likelihood of accidents, incidents, injuries, and fatalities caused by fatigue.[33] In December 2020, FRA issued a Notice of Proposed Rulemaking (NPRM) to implement the 2008 mandate.[34]

Workforce:

The average total number of workers employed by the Class I railroads at the end of 2021 was nearly one-third less than the total employed in 2015, according to data reported by the railroads and published by the Surface Transportation Board.[35] These cuts were implemented as part of precision scheduled railroading and continued through the COVID–19 pandemic.[36] Railroad workers and unions representing them contend that the workforce cuts are causing worker fatigue from increased working hours, increased workload, and management pressure to rush safety work, all of which are leading to deteriorated workplace conditions and reduced safety culture.[37] Examples include employees working 16-hour shifts consecutively, fewer workers covering larger territories, and less time permitted to inspect a rail car from three minutes to one minute.[38] They claim that this has contributed to work-

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Freight Railroads, Docket No. FRA–2015–0122, December 22, 2020. See page 83486 of that document for a description of fatigue symptoms.

[25] *Id* at 83486.

[26] *Id*.

[27] *Id*. at 83491.

[28] National Transportation Safety Board, Correspondence to the Federal Railroad Administration dated February 17, 2021, on Safety Recommendation R–12–016, https://www.ntsb.gov/investigations/_layouts/ntsb.recsearch/Recommendation.aspx?Rec=R-12-016.

[29] 49 USC Chapter 211; 49 CFR Part 228; Federal Railroad Administration, Notice of Proposed Rulemaking, Fatigue Risk Management Programs for Certain Passenger and Freight Railroads, Docket No. FRA–2015–0122, December 22, 2020, Page 83486.

[30] *Id*. at Page 83486.

[31] *Id*.

[32] *Id*. and Federal Railroad Administration, Yardmasters and Yard Safety in the U.S. Railroad Industry: An Exploratory Study, January 2007, Page 9 https://railroads.dot.gov/sites/fra.dot.gov/files/fra_net/422/ord0701.pdf

[33] Section 103 of Division A, Rail Safety Improvement Act of 2008, P.L. 110–432.

[34] Federal Railroad Administration, Notice of Proposed Rulemaking, Fatigue Risk Management Programs for Certain Passenger and Freight Railroads, Docket No. FRA–2015–0122, December 22, 2020.

[35] Employment data reported by the Class Is, published by the Surface Transportation Board. https://www.stb.gov/reports-data/economic-data/employment-data/

[36] See for example page 5 of Norfolk Southern 2019 Annual Report to Investors http://www.nscorp.com/content/dam/nscorp/get-to-know-ns/investor-relations/annual-reports/annual-report-2019.pdf and page 55 of Union Pacific 2020 Annual Report to Investors https://www.up.com/cs/groups/public/@uprr/@investor/documents/investordocuments/pdf_up_10k_02072020.pdf.

[37] Comments of BMWE, BRS, SMART Mechanical Division, NCFO 32BJ/SEIU, TWU, Submitted by Rich Edelman to the Surface Transportation Board in Docket EP 770, Urgent Issues in Freight Rail Service, April 22, 2022, throughout including pages 84, 86, 90, 103, 105, 108, 109, 122, 125, 126, 129, 130, 131, 136, 142, 148, 149, 155, and 157–159.

[38] *Id*.

ers leaving the industry and refusing recalls from furlough.[39] Railroads have in place plans to hire certain railroad workers and are reporting regularly on those plans and their progress to the Surface Transportation Board.[40]

Crew Size:

Federal regulations do not require a minimum crew size. While some railroad operations use single-person crews, Class I railroads operate with two crewmembers: a locomotive engineer and a conductor.[41] In two-person crew operations, engineers and conductors work together to safely operate a train.[42] FRA regulations do not prohibit railroads from choosing to operate a train with only one crewmember.[43]

In March 2016, FRA issued an NPRM that proposed a standard requiring a minimum of two crewmembers and minimum requirements for the roles and responsibilities of the second crewmember.[44] The NPRM proposed two options for permitting existing single-crew operations to continue and allowing operations to begin single-crew operations, as well as exceptions for certain passenger and freight operations.[45] The agency held a public hearing on the NPRM in July 2016.[46] On May 29, 2019, the FRA published in the Federal Register a notice to withdraw the 2016 NPRM.[47] In the May 2019 document, FRA wrote that the withdrawal of the NPRM preempts states from enacting laws relating to crew size.[48]

Crew Certification and Training:

FRA regulations require that railroads have approved locomotive engineer and conductor certification programs to reduce the rate and number of accidents and incidents and to improve railroad safety.[49] The standards include minimum eligibility, training, testing, certification, and monitoring standards to help ensure that only those who meet minimum safety standards serve as engineers and conductors.[50]

From March to August 2021, two certified conductors were fatally injured while performing their duties relating to train operations.[51] There were also incidents that resulted in amputation and crushing injuries.[52] In November 2021, FRA identified the concern that the industry was reducing the duration of conductor certification training for new-hire employees and noted that there had recently been two certified conductors with less than a year of service who suffered amputations after being struck by moving railroad equipment.[53] FRA began conducting comprehensive reviews and audits of all conductor certification programs to confirm compliance with Part 242.[54]

Section 22410 of the Infrastructure Investment and Jobs Act (IIJA, P.L. 117–58) directs FRA to audit the locomotive engineer and conductor qualification, certification, and training programs, in consultation with the railroads and their workers, for compliance with Parts 240 and 242.

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[39] *Id*. throughout including pages 60–63, 73–75, 90, 122, 136, and 143.

[40] The Surface Transportation Board began requiring this reporting following its April 26 and 27, 2022 public hearing with the issuance of Decision, Surface Transportation Board, Urgent Issues in Freight Rail Service—Railroad Reporting, May 6, 2022, Docket No. EP770 (Sub-No. 1).

[41] U.S. Department of Transportation, Federal Railroad Administration, Train Crew Staffing Notice of Proposed Rulemaking Regulatory Impact Analysis, February 18, 2016, FRA–2014–0033, Page 22.

[42] Subtitle V of Title 49, United States Code. Train Crew Staffing Notice of Proposed Rulemaking, Federal Railroad Administration, March 15, 2016, FRA–2014–0033, throughout including at Page 13925.

[43] *Id*. at page 13943.

[44] Train Crew Staffing Notice of Proposed Rulemaking, Federal Railroad Administration, March 15, 2016, FRA–2014–0033.

[45] *Id*.

[46] Federal Railroad Administration, Proposed rule; notice of public hearing and reopening of comment period, FRA–2014–0033 Notice No. 3, June 15, 2016.

[47] Train Crew Staffing Notice, Federal Railroad Administration, May 29, 2019, FRA–2014–0033–1606.

[48] *Id*.

[49] 49 CFR Parts 240 and 242.

[50] *Id*.

[51] November 12, 2021 letter from Deputy Administrator Bose to the Association of American Railroads, American Short Line and Regional Railroad Association, and American Public Transportation Association.

[52] *Id*.

[53] *Id*.

[54] *Id*.

Safe Train Makeup:

Proper train makeup is critical for ensuring a train is able to effectively negotiate track and prevent derailment, according to FRA.[55] Train makeup refers to the placement of individual railcars that make up a train.[56] Freight trains carry a variety of freight using different types of railcars that vary in capacity, length, weight, and other characteristics, and they operate through various weather conditions and diverse terrain as flat plains and undulating or mountainous territories.[57] Improperly assembled trains are more susceptible to derailment, in part because of vertical, longitudinal, and lateral forces throughout the train—also known as "in-train" forces—that can affect the stability of a train on its tracks, depending on a variety of factors, including the train's specifications, speed, and terrain, among others.[58] For example, excessive "in-train" forces can cause a long, heavy train to pull apart or climb off the track upon a change of grade (e.g., going up or down hills) or when the train enters a curve.[59]

A conventional air-braking system is controlled by an air pressure signal from the leading locomotive, which sends a signal through the train to engage brakes.[60] Because each railcar receives this signal sequentially, it takes multiple seconds for railcars at the end of the train to receive the air pressure signal and begin braking.[61] Application of air brakes generates in-train forces, as railcars at the front of the train that have applied brakes will be pushed by railcars further back that have not yet received the air signal.[62] Other technologies, including two-way end-of-train (EOT) devices and radio-controlled locomotives (distributed power "DP" units), are sometimes used by railroads in conjunction with conventional brakes to provide improved braking performance or other benefits, such as adding extra power to help pull or push long and/or heavy trains.[63] EOT devices measure brake pressure and transmit this information via radio signal to the front of the train.[64] An EOT device can also engage air brakes at the rear end of a train in an emergency to decrease the time required to apply the brakes on all cars.[65]

If radio communication between the controlling locomotive and EOT device is interrupted, an EOT device will not be able to initiate emergency braking when requested, according to FRA.[66] Regulations allow communication between the EOT device and the controlling locomotive to be lost for up to 16 minutes and 30 seconds before the crew is notified.[67] If an engineer encounters a situation necessitating an emergency brake application during a loss of communication, the engineer may have to request an emergency brake application multiple times before the system responds.[68] FRA raised concern with the safety risks associated with loss of communication between controlling locomotives and EOT and sought public comment in a January 2020 NPRM.[69] It published a final rule in December 2020 without mitigating communication loss; the final rule required that operating employees be trained on the limitations and use of the emergency application signal and the loss of communication indicator.[70]

In 2020, NTSB reported on an October 2018 accident in Granite Canyon, WY, in which a Union Pacific (UP) freight train collided with a stationary UP freight train after cresting a hill and descending a grade for 13 miles, killing the locomotive engi-

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[55] Government Accountability Office, Rail Safety are Getting Longer, and Additional Information is Needed to Assess their Impact, May 2019, GAO–19–443, Page 6.
[56] *Id.*
[57] *Id.*
[58] *Id.* at 7.
[59] *Id.*
[60] *Id.*
[61] *Id.*
[62] *Id.*
[63] *Id.*
[64] *Id.* at 8.
[65] *Id.*
[66] Federal Railroad Administration, Final Rule, Miscellaneous Amendments to Brake System Safety Standards and Codification of Waivers, Docket No. FRA–2018–0093, December 11, 2020, page 80551.
[67] *Id.* and 49 CFR 232.407
[68] *Id.* at 80551.
[69] Federal Railroad Administration, Notice of Proposed Rulemaking, Miscellaneous Amendments to Brake System Safety Standards and Codification of Waivers, Docket No. FRA–2018–0093, January 15, 2020, page 2506.
[70] Federal Railroad Administration, Final Rule, Miscellaneous Amendments to Brake System Safety Standards and Codification of Waivers, Docket No. FRA–2018–0093, December 11, 2020, Page 80571.

neer and conductor of the striking train.[71] NTSB determined that the probable cause was the failure of the air brake system due to restricted air flow in the train's brake pipe and the failure of the EOT to respond to an emergency brake command.[72] Contributing to the accident was failure to maintain the railcars in accordance with federal regulations, and the existence of regulatory and industry standards that permit loss of communication with EOTs for extended periods of time without warning the operating crew.[73]

Also in 2020, NTSB reported on a CSX derailment in August 2017 in Hyndman, PA, in which three derailed tank cars containing hazardous materials breached, resulting in a fire, three destroyed homes, and the evacuation of 1,000 residents.[74] This 10,612-foot long, 18,252 ton-train had no distributed power and the train encountered leaks in the braking system that were repaired enroute.[75] No injuries or fatalities occurred, with NTSB determining the probable cause of the accident was the inappropriate use of hand brakes on empty rail cars to control train speed and the placement of blocks of empty rail cars at the front of the train leading to longitudinal and lateral forces and tread buildup, both of which were permissible under CSX operating practices.[76]

Track Inspection and Autonomous Track Inspection Technology:

FRA regulates track safety under the minimum requirements of 49 CFR Part 213. The regulations specify four categories of track components requiring inspection, including track geometry, roadbed, track structure, and track appliances and track-related devices.[77] The regulations require that a designated qualified person perform visual inspections, at frequencies determined by class of track, to monitor conditions for compliance.[78] When a track inspector identifies a deviation from the minimum track safety standards, the inspector must verify the defect and take appropriate action to correct a verified defect, including immediate remediation in certain circumstances.[79]

Automated Track Inspection (ATI) systems measure and identify railroad track geometry defects.[80] Since 1974, FRA has operated an Automated Track Inspection Program (ATIP) to supplement required visual track inspections to help railroads identify noncompliant track geometry conditions requiring repairs.[81] ATI technologies can be equipped on locomotives or other rolling stock and travel over the track to be inspected via a train's movement over that track segment, including trains operating in revenue service.[82] Under FRA's ATIP, the agency operates a fleet composed of a hi-rail vehicle and seven track geometry cars, two of which are pulled by freight trains in general revenue service.[83]

Part 213 allows track owners to operate ATI systems; such technologies are not prohibited by current regulations.[84] Beginning in 2018, six of the seven Class I railroads have operated with FRA's approval under 49 CFR 211.51 ATI testing programs that include temporary suspension from the visual inspection frequency intervals required by 49 CFR 213.233.[85] The test programs permitted the carriers to reduce the frequency at which track inspectors conduct visual inspections while the

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[71] National Transportation Safety Board, Accident Report, NTSB/RAR–20/05 PB2020–101016, Collision of Union Pacific Railroad Train MGRCY04 with a Stationary Train, Granite Canyon, Wyoming, October 4, 2018, adopted December 29, 2020, Page 3.
[72] *Id.* at 10.
[73] *Id.*
[74] National Transportation Safety Board, Accident Report, NTSB/RAR–2020/04 PB2020–101012, CSX Train Derailment with Hazardous Materials Release, Hyndman, Pennsylvania, August 2, 2017, adopted November 23, 2020, Page 3.
[75] *Id.* at 15, 16.
[76] *Id.* at 10, 50.
[77] 49 CFR Subparts C, B, D, and E, respectively.
[78] 49 CFR 213.7.
[79] 49 CFR Part 213.
[80] Ian Jefferies, Association of American Railroads, Letter to Federal Railroad Administration Administrator Amit Bose, January 11, 2022, Page 1.
[81] Office of Inspector General, U.S. Department of Transportation, FRA Uses Automated Track Inspections to Aid Oversight but Could Improve Related Program Utilization Goals and Track Inspection Reporting, April 27, 2022, https://www.oig.dot.gov/library-item/38939, Page 8.
[82] Ian Jefferies, Association of American Railroads, Letter to Federal Railroad Administration Administrator Amit Bose, January 11, 2022, Page 3.
[83] Office of Inspector General, U.S. Department of Transportation, FRA Uses Automated Track Inspections to Aid Oversight but Could Improve Related Program Utilization Goals and Track Inspection Reporting, April 27, 2022, https://www.oig.dot.gov/library-item/38939, Page 8.
[84] 49 CFR Part 213.
[85] FRA–2018–0091; FRA–2019–0099; FRA–2020–0031; FRA–2019–0099; FRA–2021–0044; FRA–2020–0013; FRA–2020–0014; FRA–2020–0056.

carriers operated ATI systems on track in designated territories.[86] At the end of 2021, the total average of Class I maintenance of way and structures employees—which includes those who inspect, repair, maintain, and construct track—has decreased by approximately 23 percent compared to 2014.[87]

FRA approved extensions of test programs, four of which are set to expire in November 2022.[88] FRA approved a request for a limited waiver under 213.233 from one carrier, denied its request to expand the terms of that waiver, and denied a second carrier's waiver request.[89] In the former case, an association representing state rail safety managers and the labor union representing workers who inspect and repair track filed comments voicing concerns and objection to the waiver, respectively. In the second waiver, the same labor union commented in opposition to the waiver.[90] In the denial letters, FRA stated that "given the ongoing RSAC [Railroad Safety Advisory Committee] task related to ATI, expanding the existing relief at this time is not justified."[91] "FRA notes that in carrying out this task, the RSAC will need to consider data not only from the [carriers' ATI Test Programs], but data from the relevant ATI Test Programs that are still underway at multiple railroads. FRA finds that short-circuiting this evaluation process on individual railroads is not in the public interest and consistent with railroad safety at this time."[92]

WITNESS LIST

PANEL I:

- The Honorable Amit Bose, Administrator, *Federal Railroad Administration*
- The Honorable Thomas B. Chapman, Member, *National Transportation Safety Board*

PANEL II:

- Mr. Roy L. Morrison, Director of Safety, *Brotherhood of Maintenance of Way Employes Division, International Brotherhood of Teamsters*
- Mr. Don Grissom, Assistant General President, *Brotherhood of Railway Carmen Division, TCU/IAM*
- Mr. Grady C. Cothen, Jr., Retired, *Transportation Policy Consultant*
- Mr. Nathan Bachman, Vice President of Sales & Business Development, *Loram Technologies, Inc*.
- Ms. Cindy Sanborn, Executive Vice President & Chief Operating Officer, *Norfolk Southern Corporation*, and Chair, Safety & Operations Management Committee, *Association of American Railroads*
- Mr. Jeremy Ferguson, President, *Sheet Metal, Air, Rail, Transportation–Transportation Division*

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[86] *Id*.

[87] Data reported by Class I railroad carriers to the Surface Transportation Board, https://www.stb.gov/reports-data/economic-data/employment-data/.

[88] FRA–2020–0031; FRA–2020–0013; FRA–2020–0014; FRA–2020–0056.

[89] FRA–2020–0064, FRA–2021–0044.

[90] Docket No. FRA–2020–0064–0011, *available at* Docket No. FRA–20201–0044, *available at* https://www.regulations.gov/document/FRA-2021-0044-0003.

[91] Federal Railroad Administration Letter to BNSF dated March 21, 2022, FRA–2020–0064, Page 2.

[92] Federal Railroad Administration Letter to Norfolk Southern dated March 21, 2022, FRA–2021–0044, Page 2–3; Federal Railroad Administration Letter to BNSF dated March 21, 2022, FRA–2020–0064, Page 2–3.

EXAMINING FREIGHT RAIL SAFETY

TUESDAY, JUNE 14, 2022

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:02 a.m. in room 2167 Rayburn House Office Building and via Zoom, Hon. Donald M. Payne, Jr. (Chair of the subcommittee) presiding.

Members present in person: Mr. Payne, Mr. Malinowski, Mr. Huffman, Mr. Auchincloss, Mr. Crawford, Mr. Perry, Mr. Rodney Davis of Illinois, Mr. Bost, Mr. LaMalfa, Mr. Westerman, Mr. Stauber, Mr. Burchett, and Mr. Nehls.

Members present remotely: Mr. Moulton, Mr. García of Illinois, Ms. Strickland, Mrs. Napolitano, Mr. Johnson of Georgia, Ms. Titus, Mr. Carter of Louisiana, Mr. Weber of Texas, Mr. Fitzpatrick, Mr. Balderson, Mr. Johnson of South Dakota, and Mrs. Steel.

Mr. PAYNE. The subcommittee will come to order.

I ask unanimous consent that the chair be authorized to declare a recess at any time during today's hearing.

Without objection, so ordered.

I also ask unanimous consent that Members not on the subcommittee be permitted to sit with the subcommittee at today's hearing and ask questions.

Without objection, so ordered.

As a reminder, please keep your microphone muted unless speaking. Should I hear any inadvertent background noise, I will request that the Member please mute their microphone.

To insert a document into the record, please have your staff email it to DocumentsT&I@mail.house.gov.

Good morning. I would like to thank our witnesses for joining us today to share their testimony and expertise. I would also like to thank the ranking member, Mr. Crawford, for his commitment to making freight rail the safest way to ship goods. The safety of the rail industry remains one of the most important issues facing this subcommittee, and it is why we included several safety provisions in the INVEST Act.

Today we will hear from two panels with unique insight into safe operations of the freight rail system. First, we will hear from Amit Bose, the Administrator of the Federal Railroad Administration, whose primary role is ensuring the safety of our Nation's railroads. He will be joined by Tom Chapman, a member of the National

Transportation Safety Board, which investigates significant railroad accidents and recommends ways of preventing future ones. These two agencies play distinct roles in ensuring the safety of freight rail and protecting the workers and surrounding communities from rail accidents.

Our second panel will be an opportunity to hear from representatives of the workers and railroads who confront these safety issues every day. The NTSB's 2021–2022 Most Wanted List of Transportation Safety Improvements includes a call to improve safety for rail workers. Their recommendations speak to recurring safety issues impacting rail workers. These include better track protection, proper training and job briefings, and access to protective equipment.

Most importantly, it calls for work schedules and limitations to prevent workers from working overtime while fatigued. Railway worker fatigue is one of the most persistent and pressing issues facing our national transportation system. It is a condition we have known about for years but have not solved. Just last week, the FRA took a major step to address this with their final Fatigue Risk Management rule, and I look forward to hearing more about that from our witnesses today.

The freight rail industry has lost nearly one-third of its workforce in the past 8 years. The workers who remain report that they are being worked harder with longer and more unpredictable hours. They say these conditions are worsening fatigue and making an industry that's inherently demanding even tougher to work for. Cutting labor costs may have made Wall Street happy, but it has left our national rail system more rigid and less able to respond to the ongoing supply chain shocks.

The increased pressures on rail workers have made it harder for railroads to retain workers or recall them from furlough. It takes several months to fully train freight rail crew. These trainings cannot be rushed as we seek to fill vacancies created when the railroads laid off workers, both before and during the COVID–19 pandemic. Not having enough rail workers isn't just a problem with the lack of conductors and engineers; it is across the freight rail industry. This includes the carmen who inspect and repair railcars and maintenance-of-way workers who build, inspect, maintain, and repair track, bridges, and rights-of-way.

We are pleased that these workers are represented here today, and we look forward to hearing their testimony. It is through the diligent work of every actor in the rail space—railway workers, railroads, and regulators—that freight rail has made significant strides to move goods safely across this Nation.

There has been, however, a plateauing of safety improvements in recent years, and the Class I railroads' adoption of PSR has added new complications. This is why this committee is concerned: We are concerned that the recent attempts to reduce short-term costs have had a negative impact on safety practices and the historically proud railroad safety culture. And today's hearing is intended to consider some of these current issues.

I would again like to thank all the witnesses for joining us today, and I now yield to the ranking member, Mr. Crawford, for his opening statement.

[Mr. Payne's prepared statement follows:]

Prepared Statement of Hon. Donald M. Payne, Jr., a Representative in Congress from the State of New Jersey, and Chair, Subcommittee on Railroads, Pipelines, and Hazardous Materials

Good morning.

I'd like to thank our witnesses for joining us today to share their testimony and expertise.

I'd also like to thank Ranking Member Crawford for his commitment to making freight rail the safest way to ship goods.

The safety of the rail industry remains one of the most important issues facing this subcommittee and it is why we included several safety provisions in the INVEST Act.

Today we will hear from two panels with unique insight into the safe operations of the freight rail system.

First, we will hear from Amit Bose, the Administrator of the Federal Railroad Administration, whose primary role is ensuring the safety of our nation's railroads.

He'll be joined by Tom Chapman, a Member of the National Transportation Safety Board, which investigates significant railroad accidents and recommends ways on preventing future ones.

These two agencies play distinct key roles in ensuring the safety of freight rail and protecting the workers and the surrounding communities from rail accidents.

Our second panel will be an opportunity to hear from representatives of the workers and railroads, who confront these safety issues every day.

The NTSB's 2021–2022 Most Wanted List of Transportation Safety Improvements includes the call to improve safety for rail workers.

Their recommendations speak to recurring safety issues impacting rail workers.

These include better track protection, proper training and job briefings, and access to protective equipment.

Most importantly, it calls for work schedules and limitations that prevent workers from working overtime while fatigued.

Railway worker fatigue is one of the most persistent and pressing issues facing our national transportation system.

It's a condition we've known about for years but haven't solved.

Just last week the FRA took a major step to address this with their final Fatigue Risk Management Rule, and I look forward to hearing more about that from our witnesses today.

The freight rail industry has lost nearly a third of its workforce in the past 8 years.

The workers who remain report they are being worked harder, with longer and more unpredictable hours.

They say these conditions are worsening fatigue and making an industry that's inherently demanding even tougher to work for.

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It takes several months to fully train freight rail crew.

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This includes the carmen who inspect and repair railcars and maintenance of way workers who build, inspect, maintain, and repair track, bridges, and rights of way.

We are pleased that these workers are represented here today, and we look forward to their testimony.

It is through the diligent work of every actor in the rail space—railway workers, railroads, and regulators—that freight rail has made significant strides to move goods safely across the nation.

There has been, however, a plateauing of safety improvements in recent years, and the Class I railroads' adoption of PSR has added new complications.

This is why this committee is concerned—we are concerned that recent attempts to reduce short-term costs have had a negative impact on safety practices and the historically proud railroad safety culture.

And today's hearing is intended to consider some of those current issues.

I would again like to thank all our witnesses for joining us today, and I now yield to the Ranking Member for his opening statement.

Mr. CRAWFORD. Thank you, Mr. Chairman. I appreciate you holding this hearing today.

And I thank our witnesses for participating as well.

This hearing continues this subcommittee's focus on important aspects of railroad industry safety. Today, we are specifically focusing on safety issues in the freight rail industry.

America's freight rail ranks as one of the safest means of transporting goods in the world. According to the Association of American Railroads, train accidents were down 33 percent between the years 2000 and 2020, and accidents involving hazardous materials were down 60 percent.

These gains in safety build towards the ultimate target of zero accidents. Monitoring and protecting our 140,000-mile freight rail network is no easy job. Improving highway-rail grade crossing protections, reducing human error, and supporting innovative new drone and automated safety technologies can all contribute toward reaching the zero accident goal.

Specifically, we must continue to encourage the development of automated track inspection safety technology, which has been shown to decrease accidents, identify new safety issues, and free up safety inspectors to focus on other important duties.

I recently sent a letter to the Federal Railroad Administration raising concerns about its denials of waivers to continue testing automated track inspection technology. I ask for unanimous consent to enter this letter into the record.

Mr. PAYNE. Without objection.

[The information follows:]

Letter of June 10, 2022, to Hon. Amit Bose, Administrator, Federal Railroad Administration, from Hon. Eric A. "Rick" Crawford, Ranking Member, Subcommittee on Railroads, Pipelines, and Hazardous Materials, Submitted for the Record by Hon. Eric A. "Rick" Crawford

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
U.S. HOUSE OF REPRESENTATIVES,
WASHINGTON, DC 20515,
June 10, 2022.

The Honorable AMIT BOSE,
Administrator,
Federal Railroad Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590.

DEAR ADMINISTRATOR BOSE:

I write to express deep concerns about recent safety policy changes by the Federal Railroad Administration (FRA) which likely limit the use of automated track inspection (ATI) technology. FRA's recent decisions to deny and limit the use and development of ATI technology lack a basis in furthering safety and track inspection improvements and seem politically motivated to appease labor interests.[1]

For over thirty years, FRA supported the continued growth of automated track inspection technology through FRA's own Automated Track Inspection Program

[1] *See* Letter from Karl Alexy, Assoc. Adm'r. For R.R. Safety & Chief Safety Officer, FRA to John Cech, Vice President (VP), BNSF Ry. (Mar. 21, 2022) (on file with Committee) [hereinafter John Cech Letter]; Letter from Karl Alexy, Assoc. Adm'r for R.R. Safety & Chief Safety Officer, FRA to Thomas E. Zoeller, Gen. Counsel, NS (Mar. 21, 2022) (on file with Committee) [hereinafter Thomas Zoeller Letter].

(ATIP).[2] ATIP encourages the use of new technologies to aid in track safety inspections that identify safety issues that visual inspections may miss. Specifically, ATIP "helps America's railroads improve railroad quality and safety under statutes mandated by Congress."[3] Information collected by ATIP is used by the government and the rail industry to improve railroad safety. As FRA states:

> The track data collected by ATIP is used by FRA, railroad inspectors and railroads to assist and assure track safety is being maintained by setting priorities for their respective compliance activities. Also, the data is used by FRA to assess track safety trends within the industry. Immediately following ATIP track surveys, the railroads use the data to help locate and correct exceptions found. Often railroads use the ATIP data as a quality assurance check on their track inspection and maintenance programs.[4]

Only two years ago, FRA extolled the virtues of research and development of artificial intelligence (AI) such as ATI for improving railroad safety. As an FRA official noted, "[w]ith the use of AI and other technologies, there is great potential for railroads to further reduce the occurrence of high-consequence accidents and derailments altogether. To realize such a future for rail transportation, RD&T is focused on dedicated research initiatives aimed at Improving, Implementing and Inspiring[.]"[5]

Recognizing the ability of this technology to enhance safety, Class I freight railroads obtained FRA approvals to test the combination of ATI technology and manual track inspections by gradually reducing manual visual inspections required under a 1971 rulemaking.[6] Despite this progress, FRA's recent decisions to stop or limit ATI test programs implemented by BNSF Railway and Norfolk Southern (NS) freight railroads raise troubling questions about FRA's continued commitment to promoting safety and security technology and the influence of labor groups seeking to protect special interests.[7]

Regarding BNSF, in 2018 FRA approved an ATI test program specifically "designed to test the use of unmanned autonomous track geometry measurement systems (ATGMS) for track inspection as a viable means to supplement and decrease the frequency of manual visual inspections."[8] On July 28, 2020, BNSF petitioned FRA seeking a regulatory waiver that would allow it to continue its ATI testing.[9] FRA published two notices in the *Federal Register* seeking comments on BNSF's waiver petition, and received comments from two groups: the Association of State Railroad Safety Managers and the Brotherhood of Maintenance of Way Employees Division/IBT (BMWED). Both opposed granting a waiver to BNSF.[10] Nonetheless, on January 19, 2021, FRA generally rejected the claims made by the labor unions and granted BNSF's petition for waiver, in part, allowing BNSF to continue its ATI waiver for five years.[11] In approving BNSF's petition, FRA itself noted that ATI inspections detect geometry defects "more precisely and accurately than visual inspections" and found that granting the waiver was in the public interest and consistent with railroad safety.[12] As recently as November 2021, FRA noted the "successful results of the [BNSF] test program" to Congress and explained that BNSF's waiver was granted due to cited improvements under the "BNSF track geometry measurement test program based on the established defect metric, FRA monitoring procedures, and consistency of number of defects located by visual track inspection."[13]

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[2] *History of ATIP*, UNITED STATES DEP'T OF TRANSP. (USDOT), *available at* https://railroads.dot.gov/track/automated-track-inspection-program-atip/history-atip. [hereinafter *History of ATIP*].

[3] *ATIP Overview*, USDOT, *available at* https://railroads.dot.gov/track/automated-track-inspection-program-atip/atip-overview.

[4] *History of ATIP*, *supra* note 2.

[5] Jay P. Baillargeon, *FRA RD&T: Using AI to Improve Safety*, RAILWAY AGE, Aug. 24, 2020, https://www.railwayage.com/analytics/fra-rdt-using-ai-to-improve-safety/?RAchannel=home.

[6] Chris Woodward, *Why Is Biden Admin. Blocking Increased Rail Safety Program?*, INSIDE SOURCES, May 4, 2022, https://insidesources.com/why-is-biden-admin-blocking-increased-rail-safety-program/.

[7] *See* John Cech Letter, *supra* note 1; Thomas Zoeller Letter, *supra* note 1.

[8] *See* Docket No. FRA–2020–0064–0011, *available at* https://www.regulations.gov/docket/FRA-2020-0064/document.

[9] *Id.*

[10] *Id.*

[11] *Id.*

[12] *Id.*

[13] FRA, REPORT TO CONGRESS: AUTOMATIC TRACK GEOMETRY MEASUREMENT SYSTEM TECHNOLOGY TEST PROGRAMS at 5 n.12, 9 (2021), *available at* https://railroads.dot.gov/elibrary/report-/congress-automatic-track-geometry-measurement-system-technology-test-programs.

However, on June 15, 2021, BNSF again petitioned FRA based upon the safety successes occurring under the January 19, 2021, waiver and sought an expansion to two new ATI territories.[14] BNSF supplemented this petition with two letters highlighting the improved safety benefits and success of BNSF's current ATI program as support.[15] FRA published notice of BNSF's petition in the *Federal Register*, which elicited only one comment, from BMWED. As before, BMWED generally opposed granting the expansion envisioned by the waiver on the grounds that it "does not feel"[16] the ATI technology provided an adequate level of safety. On March 22, 2022, FRA found that expansion of the waiver "is not justified,"[17] and dismissed BNSF's petition. Notably, FRA did not dispute ATI's safety benefits, but merely asserted that an expansion of this test program was allegedly unnecessary since FRA had already collected sufficient data from BNSF to evaluate ATI.[18]

Like BNSF, Norfolk Southern (NS) filed a petition with FRA on March 22, 2021, seeking a waiver of manual track inspection regulations to permit the pairing of ATI technology with the frequency of manual inspections that successfully demonstrated significant gains in track quality and safety during NS's test program.[19] At the time the waiver petition was filed, NS was completing the final phase of its ATI test program.[20] NS noted increased benefits of combining ATI and manual inspections, and reported: "Almost all geometry defects found during the Test Program were discovered by the [ATI] equipment rather than by human inspectors."[21]

After waiting over nine months from initial filing of its waiver petition, NS pleaded for FRA action. In a January 6, 2022, letter seeking approval, NS explained "[e]very day that passes without approval of Norfolk Southern's Petition is another day that safety benefit is not realized anywhere on Norfolk Southern's system . . ."[22] Similar to BNSF's ATI waiver petitions, BMWED submitted comments opposing the petition, despite admitting the safety benefits of NS's ATI technology.[23] In defiance of FRA regulations requiring the FRA Safety Board to decide waiver petitions within nine months, FRA denied NS's petition a full year later, citing excuses similar to those used in denial of BNSF's petition.[24]

FRA's decisions to discourage the continued use and expansion of proven ATI safety technology deny the demonstrated safety benefits for freight rail operations and lack a reasonable justification linked to improving industry safety and security. As one rail observer noted, the BNSF decision "makes no sense . . . whatsoever"[25] and signals that "FRA seems to have made an about-face with its technology initiatives."[26] Furthermore, given the only opposition to the continued ATI programs came from BMWED, denial of the waivers seem less driven by legitimate safety concerns with ATI and instead, "may be politically motivated" to satisfy the special interests of labor unions.[27]

In light of the above information and concerns, please provide the following information by June 23, 2022:

1. Please provide a written explanation that details FRA's current process to decide railroad waiver requests, including what role the Safety Board plays in the decision-making process. Please also include any standard operating procedures, memos, or internal process documents which relate to this decision process.
   a. Please outline the Administrator's role, if any, in granting or denying a waiver petition in the first instance under 49 C.F.R. § 211.41.
   b. Please outline the Administrator's role, if any, regarding considering petitions for reconsideration of the grant or denial of a waiver, per 49 C.F.R. §§ 211.41(f) & 211.57–.59.

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[14] John Cech Letter, *supra* note 1.
[15] *Id.*
[16] *Id.*; *see also* Letter from Freddie N. Simpson, President, BMWED to USDOT (Aug. 23, 2021) (on file with Committee).
[17] *Id.*
[18] *Id.*
[19] Letter from Ed Boyle, VP NS to Hon. Amit Bose, Deputy Adm'r, FRA (Jan. 6, 2022) (on file with Committee).
[20] *Id.*
[21] *Id.*
[22] *Id.*
[23] *Id.*
[24] Thomas Zoeller Letter, *supra* note 1.
[25] William C. Vantuono, *BNSF, FRA Automated Track Inspection Dispute in Federal Court*, RAILWAY AGE, Apr. 21, 2022, https://www.railwayage.com/regulatory/bnsf-fra-automated-track-inspection-dispute-in-federal-court/?RAchannel=home.
[26] *Id.*
[27] *Id.*

c. Please outline and explained what factors are considered when the Administrator is weighing whether to overrule a recommendation of the safety board?
d. Please explain in detail changes made to the process to decide railroad waiver requests since 2021 and the justification for such changes.
e. Please explain what steps have been taken to formally notify stakeholders of these changes. If notice has not been provided, please explain the justification.

2. Please provide a written explanation as to whether the FRA Safety Board believes it is fulfilling the requirements of 49 C.F.R. § 211.41 when it is considering waivers, including the nine-month timeline under that regulation.
   a. Does FRA have adequate resources and staff to timely evaluate and decide railroad waiver requests?
   b. If not, what is impacting the agency's overall ability to timely issue waiver decisions since 2021, and what additional resources might be needed to ensure decisions are made in the regulatorily required time periods.
3. Does FRA believe any deficiencies existed in the transparency of the waiver process prior to 2021?
   a. If so, what specific steps has FRA taken improve the transparency in the process?
   b. Please provide any standard operating procedures, memos, or internal documents related to the waiver process prior to 2021.
4. Please outline and provide written justifications for each step the FRA taken since 2021 to ensure the efficient handling of waiver requests.
   a. Specifically, please explain the steps that FRA has taken with stakeholders to ensure the efficient handling of waiver requests, including which stakeholders FRA is working with.
5. What steps are the FRA taking to encourage and support implementation of new technologies to improve safety for freight railroads? Please provide specific examples of what areas the FRA is examining as well as specific technologies that are under examination.
   a. Does the FRA support freight railroads investing their own funds in voluntary safety advancements?
   b. How does FRA incentivize and encourage voluntary industry efforts to advance safety and modernize severely outdated FRA regulations to realize better safety? Please explain in detail the steps you have taken, including any supporting documents.
   c. What is FRA doing from a regulatory perspective to encourage railroads to continue to invest in and develop these technologies, understanding the substantial cost to do so?
   d. If a new approach to rail safety driven by an innovative technology solution is shown through data to improve overall railroad safety, are there other non-safety considerations that would cause the FRA to delay or reject such an approach?
6. FRA has acknowledged to Congress the safety benefits of ATI programs. Why did FRA recently deny two railroad ATI waiver requests, one a year after it was submitted? Given that four test programs are still underway and collecting data, what led to FRA's recent waiver denial letters being issued?
   a. Given the safety benefits involved, why would FRA let existing ATI test program approvals expire without renewing them in November 2022? Why wouldn't test programs and waivers continue to be granted and renewed until a final rule adopting this safety-improving issue can be completed?
   b. While NS's waiver petition was pending, FRA denied NS's request to extend its test program in October 2021 on the ground that an extension "would not likely result in new, significant data." Yet when FRA denied NS's waiver in March of 2022, it pointed to a lack of "conclusive data" demonstrating that the risks of reducing manual inspections were effectively mitigated. As FRA's denial of the waiver was based on a lack of "conclusive data," please explain the process FRA engages in for expressing concerns or changes during extension of test programs.
      i. Please specifically provide the Committee the information that was provided by NS and the FRA regarding this extension in October 2021.
      ii. Specifically, please provide a written explanation of whether it complied with this FRA's extension process, and whether FRA provided NS with any options to cure the lack of conclusive data or further information on conditions that would have been necessary.
   c. Why is FRA not moving to rulemaking now to address these safety-improving programs, given the present RSAC process could take years and may never result in reasonable consensus with involved rail labor organizations?

7. The USDOT's fiscal year (FY) 2022 budget requests $16.5 million for the FRA ATI Program (ATIP). The request specifically notes "defective track is one of the most frequent causes of derailments. Identifying track defects and other precursor conditions is the primary focus of FRA's ATIP."[28] The budget request goes on to explain that the requested funding would be used for FRA's own ten ATIP vehicles, but also "to continue to validate the railroads' autonomous track inspection programs."[29]
   a. If the FRA receives the requested funding for ATIP, will it commit to continue to use part of the funding to continue to validate the railroads' autonomous track inspection programs?
   b. If yes, do you believe the FRA would then need to approve and/or continue the pending railroad ATI waivers requests and test programs? Please explain in detail.
   c. If no, please explain in detail the justifications for FRA's reversal. Please include a detailed list of other FY 2022 budget request that the FRA no longer plans to pursue and the justification.
8. Another promising safety innovation, which is particularly important during the COVID pandemic, is 3–D virtual training. These programs could also be helpful in ensuring employee re-training and availability of training in the wake of supply chain challenges. After 14 months, the FRA recently denied railroad waiver requests even though they have previously approved similar requests. Please explain FRA's reasoning for the reversal.
9. In addition to safety improvements, new technologies also have the potential to provide environmental benefits. However, FRA has changed its decades-long precedent of expeditiously reviewing and approving energy management system advancements under 49 CFR Part 229, Subpart E—Locomotive Electronics, and instead, without explanation, is now conducting them under 49 CFR Part 236, Subpart H—Standards for Processor-Based Signal and Train Control Systems. Please explain why FRA made change.
   a. Prior to this change, were stakeholders consulted? If yes, please explain which stakeholders and the method for consultation.
   b. Please explain what steps have been taken to notify stakeholders of these changes. If notice has not been provided, please explain the justification.
   c. Provide specific examples of freight railroad technologies being explored by the FRA that provide environmental benefits.

If you have questions, please contact Republican Staff on the Subcommittee on Railroads, Pipelines, and Hazardous Materials.

Sincerely,

ERIC A. "RICK" CRAWFORD,
Ranking Member, Subcommittee on Railroads, Pipelines, and Hazardous Materials.

Mr. CRAWFORD. Thank you, Mr. Chairman.

And, finally, there are multiple Federal grant programs that can help communities and railroads upgrade and improve their tracks, highway-rail grade crossings, and general network infrastructure in ways that can have dramatic impacts on safety. We must ensure that this grant funding is open and accessible to all qualified applicants in need and that the money is distributed in a fair and transparent manner, including to both rural and urban areas.

I commend the chair for holding this hearing today, and I look forward to hearing from our witnesses.

And, Mr. Chairman, with that, I yield the balance of my time.

[Mr. Crawford's prepared statement follows:]

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[28] FRA, FRA BUDGET ESTIMATES 2022 at 32 (2022), *available at* https://www.transportation.gov/sites/dot.gov/files/2021-05/FRA-FY-2022-Budget-Estimates-FINAL.PDF.

[29] *Id.*

Prepared Statement of Hon. Eric A. "Rick" Crawford, a Representative in Congress from the State of Arkansas, and Ranking Member, Subcommittee on Railroads, Pipelines, and Hazardous Materials

Thank you, Chair Payne, for holding this hearing, and thank you to our witnesses for participating. This hearing continues this Subcommittee's focus on important aspects of railroad industry safety. Today we are specifically focusing on safety issues in the freight railroad industry.

America's freight railroads rank as one of the safest means of transporting goods in the world. According to the Association of American Railroads, train accidents were down 33 percent between 2000 and 2020, and accidents involving hazardous materials were down 60 percent.

These gains in safety build towards the ultimate target of zero accidents. Monitoring and protecting our 140,000-mile freight rail network is no easy job. Improving highway-rail grade crossing protections, reducing human error, and supporting innovative new drone and automated safety technologies can all contribute towards reaching the zero-accident goal.

Specifically, we must continue to encourage the development of automated track inspection safety technology, which has been shown to decrease accidents, identify new safety issues, and free up safety inspectors to focus on other important duties.

I recently sent a letter to the Federal Railroad Administration raising concerns about its denials of waivers to continue testing Automated Track Inspection technology. I ask for unanimous consent to enter this letter into the record.

Finally, there are multiple federal grant programs that can help communities and railroads upgrade and improve their tracks, highway-rail grade crossings, and general network infrastructure in ways that can have dramatic impacts on safety. We must ensure that this grant funding is open and accessible to all qualified applicants in need, and that the money is distributed in a fair and transparent manner, including to both rural and urban areas.

I commend the Chair for holding this hearing today and look forward to hearing from our witnesses.

Mr. PAYNE. The gentleman yields back.

OK. I guess we can move forward. I would like to now welcome our witnesses for the first panel: the Honorable Amit Bose, Administrator, Federal Railroad Administration, and then the Honorable Thomas B. Chapman, member of the National Transportation Safety Board.

Thank you for joining us today, and I look forward to your testimony.

Without objection, our witnesses' full statements will be included in the record. Since your written testimony has been made a part of the record, the subcommittee requests that you limit your oral testimony to 5 minutes.

Administrator Bose, you may proceed.

TESTIMONY OF HON. AMIT BOSE, ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION; AND HON. THOMAS B. CHAPMAN, MEMBER, NATIONAL TRANSPORTATION SAFETY BOARD

Mr. BOSE. Chairman Payne, Ranking Member Crawford, and members of the subcommittee, thank you for the opportunity to testify today. Returning to this committee where I was a staffer who worked on TEA–21 and WRDA and stood along the wall, as many of the staffers will do today, is an honor.

Safety, including the safety of railroad employees, railroad passengers, and communities through which railroads operate, is FRA's top priority. FRA carries out its mission in many ways, including through our broad regulatory enforcement and oversight program of inspections and audits. FRA also conducts accident and

incident investigations, scientific research, and data collection and analysis, and provides extensive technical assistance.

FRA also reviewed the safety integration plans of the largest rail company transactions before the Surface Transportation Board in several decades. The Bipartisan Infrastructure Law provides an unprecedented investment in America's rail transportation system. It includes dedicated and sustained funding that enables FRA to continue its core safety mission while broadening its rail development and investment portfolio. Among them are substantial funds to deter and mitigate two longstanding rail safety issues: highway-rail grade crossing collisions and trespassing.

Through other grant programs, FRA will support training and education for our industry's workforce to help ensure appropriate job protections for those working on federally funded rail projects. With these expected historic investments in our Nation's rail system, supporting the industry's workforce in safely and efficiently operating and maintaining the current system while preparing for the future is now more critical than ever.

FRA's approach to safety is data-driven, risk-based, and collaborative. The full implementation of Positive Train Control technology was significant. FRA continues monitoring PTC, including software updates, training, and integration into operations. With the issuance of the Fatigue Risk Reduction Program and System Safety Program rules, railroads have been required to systemically identify, prioritize, and mitigate risks, and to actively promote continuous safety improvement and strengthen their safety culture by actively engaging the workforce.

FRA continues to work on other significant regulatory initiatives mandated by Congress and to address known hazards more broadly. For example, in February, FRA expanded the scope of the agency's alcohol and drug control regulations, and we expect to issue soon a final rule dedicated to locomotive recording devices. Yesterday, FRA published a final rule requiring certain railroads to develop and implement Fatigue Risk Management Programs as a part of their larger Risk Reduction and System Safety Programs.

Aside from these initiatives, FRA is seeking to engage all stakeholders in consensus-based safety improvements and rulemaking through the Railroad Safety Advisory Committee, which we rechartered in late 2021. It will meet again on June 27.

In April of this year, FRA held its first-ever Track and Railroad Workplace Safety Symposium, during which over 600 technical experts shared best practices. Similarly, in the spirit of partnership and collaboration, FRA is seeking to expand the Confidential Close Call Reporting System, C3RS, which enables railroad employees to report close calls and unsafe events and conditions without fear of reprisal or discipline.

As we look forward, FRA already had several initiatives underway included in the Bipartisan Infrastructure Law. In late 2019, FRA established an online portal to receive, store, and retrieve public reports on blocked highway-rail grade crossings. And, just today, we issued a request for information to solicit public input on how to make that tool even more useful.

Other efforts are well underway to implement the Bipartisan Infrastructure Law sections related to high-speed rail operations and

pre-revenue service safety validation plans. With respect to infrastructure investments, FRA just announced the CRISI grants, totaling nearly $369 million for 46 projects across 32 States, and we exceeded the bipartisan law's 25-percent rural set aside.

In conclusion, FRA is committed to continuing to lead, promote, and strengthen efforts among all stakeholders to achieve meaningful and continuous improvements in rail transportation safety. I look forward to your questions. Thank you.

[Mr. Bose's prepared statement follows:]

Prepared Statement of Hon. Amit Bose, Administrator, Federal Railroad Administration

Chairman Payne, Ranking Member Crawford, and Members of the Subcommittee:

Thank you for the opportunity to testify today to discuss rail safety. The mission of the Federal Railroad Administration (FRA) is to enable the safe, reliable, and efficient movement of people and goods for a strong America, now and in the future. Safety—including the safety of railroad employees, rail passengers, and the communities through which railroads operate—is FRA's top priority. FRA carries out its mission in many ways, including through our broad regulatory enforcement and oversight program, accident and incident investigations, providing extensive technical assistance, scientific research, and data collection and analysis. We also engage and partner with both public and private stakeholders to identify and address critical safety issues that affect railroad operations, railroad employees, freight rail customers, the traveling public, and local communities.

Additionally, FRA administers a variety of discretionary grant programs. These programs have traditionally focused on funding to improve the condition and performance of rail infrastructure. However, with the passage of the Bipartisan Infrastructure Law (BIL), these programs now include dedicated federal funds to support the implementation of innovative solutions to deter and mitigate two longstanding and vexing rail safety issues—highway-rail grade crossing collisions and trespassing. The BIL also enables FRA to support the industry's workforce by making funds available for training and education, and for ensuring appropriate job protections for employees impacted by federally funded rail projects.

The BIL provides dedicated and sustained resources that enable FRA to continue to focus on its safety mission while broadening its efforts on its rail development and investment portfolio to offer safer and more convenient travel options for future generations. FRA recognizes that the BIL is an unprecedented investment in our country's intermodal transportation system, including freight and passenger rail which are integral to the national transportation system. It presents a unique opportunity for FRA and other stakeholders to make wise investments in critical infrastructure, technology, and human capital that will make it safer, more reliable, resilient, sustainable, and equitable. FRA is committed to using the BIL's resources to bolster and expand its existing safety programs, and where appropriate, to work with industry, labor, and others to develop and implement new and innovative solutions to address rail safety challenges.

Despite improvements in overall rail safety statistics elsewhere and the implementation of advanced technologies such as PTC, the number of grade crossing and trespassing incidents occurring over the last decade has increased—grade crossing collisions by 1% and trespassing casualties by 35%. Together these events account for more than 95% of all rail-related fatalities over the past decade. In addition, human-factor accidents remain a concern. FRA recognizes the opportunities the BIL presents to better enable the agency, and other stakeholders, to address these occurrences. Today, I would like to highlight our most significant regulatory and safety initiatives, including implementation of several key safety provisions of the BIL, and our strategy for ensuring BIL funding is appropriately directed to the most pressing rail safety issues. With this unprecedented investment in our Nation's rail system, it is now more critical than ever to ensure that we enable the industry's workforce to safely and efficiently operate and maintain the current system while preparing for the future. Accordingly, I will also highlight a few of FRA's key workforce development efforts.

FRA's Priority Regulatory and Safety Initiatives

FRA's approach to safety is data-driven, risk-based, proactive, and collaborative. The full implementation of Positive Train Control (PTC) technology on all 57,536 required freight and passenger railroad route miles, has made railroad transportation safer. FRA will continue monitoring PTC, including software updates, training and integration into operations. With the issuance of its Risk Reduction Program (RRP) and System Safety Program (SSP) rules, railroads have been required to implement a comprehensive, system-oriented approach to improving safety. Although implementation of these rules is just beginning, they bring the tried-and-true principles of safety management systems to the rail industry. The rules require railroads to systematically identify, prioritize, and mitigate risks in their operating environment and to actively promote continuous safety improvement and strengthen safety culture.

Currently, all Class I railroads and passenger rail operations required to submit RRP and SSP plans have done so, and FRA is working with them and labor organizations to provide technical assistance to ensure the railroads successfully conducted appropriate consultation with directly affected employees during development of the plans. The consultation process of FRA's RRP and SSP rules, as well as the fatigue rule discussed below, requires engagement between railroads and directly affected employees at all stages of plan development and program implementation. To this end, and based on lessons learned from initial implementation of the RRP and SSP rules, in the upcoming weeks, FRA will provide written guidance on its expectations for the ongoing consultation requirements under each of these rules.

Even as industry works to identify and prioritize risk on individual railroad systems, FRA continues to work on regulatory initiatives mandated by Congress and to address known hazards on a broader basis. For example, in February of this year, FRA published a final rule implementing Congress's mandate to expand the scope of the agency's alcohol and drug control regulations to cover railroad mechanical employees. Soon, FRA expects to issue a final rule responsive to a Congressional mandate related to locomotive recording devices.

On June 13, 2022, FRA published a final rule addressing railroad employee fatigue. This rule responds to the same Congressional mandate as FRA's RRP and SSP rules and requires railroads to develop and implement Fatigue Risk Management Programs (FRMPs) as part of their larger risk reduction programs. FRMPs are railroad-specific, comprehensive safety programs involving the systematic identification and evaluation of fatigue-related safety hazards among railroad employees. Once the hazards are identified and evaluated, a railroad must take action to reduce, if not eliminate, the associated risks. Although the rule identifies the minimum categories of risk that a railroad must consider including in its FRMP (i.e., general health and medical conditions that may affect employees' fatigue levels, scheduling issues, and job-specific characteristics), the rule is results-oriented. Railroads' FRMPs must be designed and implemented to effectively reduce the fatigue experienced by employees and to reduce the probability of fatigue-related accidents and incidents.

As noted above, consistent with the requirements of FRA's RRP and SSP rules, the fatigue rule requires railroads to consult with directly affected employees during all stages of development and implementation of the required FRMP. Recognizing that fatigue is a complex issue, the rule is only one facet of FRA's ongoing efforts to address the issue. For example, FRA recently conducted a survey of locomotive engineers and conductors to gain an in-depth understanding of the factors that contribute to fatigue and the resulting impacts on safety. Survey questions addressed potential contributing factors to fatigue, such as work schedules, commute times, and work/life balance. FRA will use the survey results to identify fatigue-related research needs and the survey's descriptive data will help FRA facilitate mutually beneficial solutions between railroad workers and management. Thus, even after issuance of this rule, FRA will continue to gather and analyze data to better understand the root causes of railroad employee fatigue and its effects on safety.

As required by the BIL, FRA will continue to work with both rail and labor stakeholders to identify parties willing to participate in a pilot project under 49 U.S.C. § 21109 to evaluate the fatigue implications of certain railroad employee scheduling practices. FRA will also continue to conduct fatigue analyses as part of its investigations of major rail accidents suspected of being human-factor caused. FRA will continue our review and analysis of railroads' attendance and other scheduling policies to ensure they do not conflict with the federal hours of service laws or otherwise adversely affect safety. Based on these ongoing efforts, FRA will take further actions it determines necessary and within its statutory authority to address issues associated with railroad employee fatigue.

FRA is developing a Notice of Proposed Rulemaking (NPRM) addressing train crew staffing safety requirements. The rule would address potential safety risks for train operations with fewer than two crew members. This proposed rule demonstrates FRA's belief that safety and innovation go hand-in-hand. Historically, technological advances have enabled a gradual reduction in the number of train crew members. Today, with certain exceptions, most trains are operated with two-person crews. As technology continues to advance and automation is on the horizon, FRA intends this rule to serve as a tool to proactively address the potential safety impact of train operations with fewer than two crew members. The draft NPRM is currently under review with the Office of Management and Budget. Once issued, FRA looks forward to receiving and considering feedback from all stakeholders.

In terms of innovation, the Department has shared its innovations principles:

- Serve our policy priorities;
- Help America win the 21st century;
- Support workers;
- Allow for experimentation and learn from failure;
- Provide opportunities to collaborate; and
- Be flexible and adapt as technology changes.

Those principles are a roadmap for innovation. FRA looks forward to assessing proposals and efforts that reflect these principles.

Aside from these regulatory initiatives, with the rechartering of the Railroad Safety Advisory Committee (RSAC) in late 2021, FRA is refocusing its efforts to engage all stakeholders in the collaborative and consensus-based rulemaking process. The RSAC was first established more than a quarter century ago and provides a forum for the free and candid exchange of technical expertise and views. FRA believes open discussions and exchanges of data and ideas by all stakeholders, including railroad employees, industry, and government technical experts, are key to continued improvements in rail safety.

Not all safety advances are achieved through the regulatory process. FRA believes collaboration among all stakeholders is critical. For this reason, in April of this year, FRA held its first ever Track and Railroad Workplace Safety Symposium. Over 600 technical experts in track safety and roadway workplace safety participated in the gathering, which provided a forum to discuss and share information and best practices related to track inspection, maintenance, and roadway worker protection.

Similarly, in the spirit of partnership and collaboration, FRA's Confidential Close Call Reporting System (C3RS) program enables railroad employees to report close calls and unsafe events and conditions without fear of reprisal or discipline. Root cause analysis is conducted on individual close calls, and collectively, safety hazards are identified. It is a voluntary program with 21 railroads (including passenger, commuter, and Class II and III freight railroads) representing nearly 27,000 safety-related railroad employees currently participating. Statistics show that over 75% of the close calls reported are events that would never have become known without the program. In 2021, the program launched the online Data Base Query Tool (DBQT). The DBQT is the Nation's largest repository of voluntarily-submitted railroad safety reports, each originating within FRA's C3RS program. All stakeholders can use the publicly-available reports to help improve safety through human factors research, education, training and similar efforts. Recognizing the value in the data generated from this program, FRA is currently working to expand the program to include Class I freight railroads and through a pilot program with the Short Line Safety Institute, FRA is working to encourage the participation of additional Class III railroads.

FRA also continues to improve its accident and incident investigation processes. These processes are designed to identify primary and contributing causes so future accidents can be prevented and also to identify local and industry-wide hazards, so that those hazards can be proactively mitigated. Given these goals, collecting accurate accident and incident data is critical and FRA has renewed its focus on ensuring the accident and incident cause codes reported by railroads accurately reflect the facts of each accident or incident under investigation.

FRA's Implementation of Key BIL Safety Mandates

Along with the BIL's unprecedented federal investment in the Nation's rail network, the law requires FRA to take specific actions to improve railroad safety. In addition to the fatigue pilot studies I noted earlier, key safety provisions of the BIL require FRA to take the following actions:

- Establish a blocked crossing portal;
- Conduct a comprehensive rail safety review of Amtrak;

- Partner with the National Academies of Science (NAS) to conduct a study of the operation and safety of trains longer than 7,500 feet;
- Institute a system of audits of the training, qualification, and certification programs of railroad locomotive engineers and conductors; and
- Issue rules to enable high-speed rail service; and require pre-revenue service safety validation plans for certain railroads providing intercity or commuter rail passenger transportation.

Although FRA already had initiatives underway consistent with several of the BIL mandates prior to passage of the law, the BIL has served to renew and streamline FRA's focus on these efforts. For example, the BIL mandates that as a pilot program, FRA establish a blocked crossing portal to receive, store, and retrieve information regarding blocked highway-rail grade crossings. FRA's blocked crossing portal has been in place since late 2019 and FRA is currently working to update and improve it to comply with the BIL. In addition, on June 14, 2022, FRA issued a request for information so FRA can hear from communities how to design the tool in the most useful manner possible.

FRA's efforts to implement several of the BIL's rulemaking mandates are well underway. For example, FRA's current regulatory agenda includes rules responsive to the BIL's mandates related to high-speed rail operations, pre-revenue service safety validation plans for certain rail passenger operations, and rules proposing to incorporate into FRA's regulations several longstanding waivers from FRA's regulatory requirements.

In addition to the BIL, FRA has other safety efforts well underway in its day-to-day work. These are efforts that result in maintaining and improving rail safety. In 2021, FRA initiated a program of conducting periodic comprehensive system-wide safety audits of Class 1 railroads. To date, FRA has completed an audit of the Union Pacific Railroad Company and is currently in the process of auditing Norfolk Southern Railway Company. Within the next few months, FRA is planning to initiate the BIL-mandated comprehensive rail safety review of Amtrak as part of this existing program. Similarly, prior to passage of the BIL, FRA had an ongoing research program dedicated to the safety and operation of long trains. In response to BIL's mandate that FRA partner with the NAS on this issue, FRA has begun the process of sharing its ongoing work with the NAS to better inform the more extensive study the BIL mandates.

In early 2021, out of concern about some railroads' changes to their longstanding approaches to training under their FRA-approved operating crew certification programs and consistent with recommendations of the Department's Office of Inspector General, FRA began conducting more detailed reviews of railroads' operating crew training programs. Subsequently, in November 2021, I directed FRA's Office of Railroad Safety to begin a process of comprehensively reviewing and auditing all railroads' conductor certification programs in response to accidents involving the severe on-duty injuries of railroad conductors, including three accidents in which railroad conductors were fatally injured.[1] Thus far, that review has found that some railroads' written programs do not conform with the regulation. FRA technical experts are working with the railroads to ensure that their programs conform with FRA regulations. The BIL mandate to audit these programs reinforces FRA's efforts in this area and FRA will begin the auditing process with the railroads' conforming written programs in place.

Strategies to Improve Grade Crossing Safety and Prevent Trespassing on Railroad Property

FRA is working to identify innovative and non-traditional ways to enhance grade crossing safety and prevent illegal trespassing on railroad property. The agency continues to take a comprehensive approach to both issues, and although the Department recognized grade crossing safety in its 2021 Roadway Safety Strategy, neither the Department nor FRA alone can solve these issues. Collaboration with Departmental modal partners is key, as is collaboration and the empowerment of all stakeholders, including states, local communities, law enforcement, and others. For this reason, FRA continues to implement its *National Strategy to Prevent Trespassing on Railroad Property* and has launched the National High Risk Crossing Initiative. These efforts include conducting focused inspections, educational outreach, and

[1] The accidents involving fatal injuries occurred on both Class I and short line railroads as follows: BNSF Railway Company (March 3 and April 7, 2021); and WATCO Switching (October 29, 2021). Additionally, on December 2, 2021, a conductor for the R.J. Corman Railroad Company was fatally injured while on-duty.

partnering with local communities in places with the highest number of trespassing incidents and high-risk grade crossings.

FRA will continue this collaboration with other DOT operating administrations, local community leaders, law enforcement, railroads, and the public to identify and share best practices and local mitigation strategies. As part of these efforts, FRA is working to make all stakeholders aware of the funding opportunities presented by the BIL—including the new Railroad Crossing Elimination Program (RCEP) and the availability of Consolidated Rail Infrastructure and Safety Improvements (CRISI) funds not only for capital improvement projects, but projects addressing trespass prevention as well. Trespass enforcement activities were initially demonstrated and evaluated through FRA-funded research with DOT's Volpe Center, and those results led directly to the creation of the successful dedicated funding program within CRISI.

FRA has conducted three outreach sessions on the RCEP, stressing the program's ability to fund all types of grade crossing improvements, including grade separations, closures, and other actions to eliminate problematic crossings and providing potential applicants guidance on the application process. FRA expects to publish a Notice of Funding Opportunity (NOFO) for this program this summer.

FRA just announced the first round of CRISI awards since passage of the BIL. Notably, FRA awarded CRISI funds to 46 projects from 32 states and the District of Columbia, with approximately 49% of the funding going towards projects in rural areas, exceeding the BIL's 25% percent set aside for such areas. FRA expects to release the FY22 CRISI NOFO—the first round of CRISI funding provided by the BIL—in late summer or early fall.[2]

The level of CRISI funding provided by the BIL will also allow FRA to invest in traditional, hard infrastructure safety projects, including track and bridge replacements, but also more new, innovative, and collaborative projects, such as the Rail Pulse project selected in FY20 CRISI funding cycle. The FRA will be working with PennDOT and the Rail Pulse Coalition members to develop a railcar onboard GPS sensor system to provide real-time information. If successful, this technology would not only result in more efficient and transparent freight rail shipping, but also provide safety enhancements and information such as sensors monitoring hand brake position and impact over certain speeds.

Focus on Enhancing Workforce Capacity and Development

FRA believes that with the unprecedented investment into our Nation's rail infrastructure the BIL provides and to support continued innovation and technological advancements, it is critical to ensure the industry's workforce is properly educated and trained. For this reason, FRA has renewed its focus on rail industry workforce development. For example, FRA recently published draft guidance for its grantees to ensure industry employees jobs are adequately protected from potential adverse impacts of federally funded rail projects. In addition, FRA's 2023 budget request outlines an FRA initiative to establish a Railroad Workforce Development program with dedicated funding within CRISI. Although workforce development and training projects have been eligible for CRISI funds since the passage of the FAST Act, FRA historically received very few applications. With that said, FRA was excited to recently announce two FY21 workforce development awards under CRISI. The first, for a railroad engineering program at Morgan State University, a historically black college and university (HBCU) in Baltimore, MD, in collaboration with the University of Delaware. The second award is for an Amtrak pilot program for a three-year Mechanical Craft Workforce Development Apprenticeship Training Program, to take place in Los Angeles, CA; Chicago, IL; Beech Grove, IN; New York, NY; Wilmington, DE; and Washington DC. FRA believes that formalizing and dedicating funding to the program will spur additional interest in workforce development and training.

Additionally, FRA's 2023 budget request seeks funds to establish a National Railroad Institute. Learning from its modal partners, the Federal Highway Administration and the Federal Transit Administration, which both maintain training institutes, and with support of our colleagues at DOT's Volpe Center, the National Railroad Institute will develop and conduct training and education programs for both public- and private-sector railroad and allied industry employees. FRA envisions the Institute playing a crucial role in ensuring railroad workers develop and maintain the skillsets and tools necessary to succeed in the industry's rapidly evolving technological landscape.

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[2] A full list of FRA BIL funding and program milestones, as well as a tentative calendar for future actions, is available at: https://railroads.dot.gov/BIL

In conclusion, FRA is committed to continuing to lead, promote, and strengthen efforts among all stakeholders to achieve meaningful and continuous improvements in rail transportation safety. FRA recognizes its responsibilities to the public, railroad employees, and the rail industry in general, to ensure the unprecedented investments the BIL is providing are used to make our Nation's freight and passenger rail systems safer, more reliable, more resilient, more sustainable, and more equitable than ever before. FRA is committed to meeting these responsibilities.

Mr. PAYNE. Thank you.

And now we recognize Mr. Chapman.

You may proceed, sir.

Mr. CHAPMAN. Good morning, Mr. Chairman, Ranking Member Crawford, and members of the subcommittee. We appreciate this opportunity to share insights regarding issues relating to freight railroad safety.

I have a strong personal interest in rail safety. In the early 1950s, my grandfather was struck and killed in a railroad grade crossing crash. He was a volunteer firefighter on a duty call with a colleague when the collision occurred. Because of my family history, I have made rail safety, and grade crossing safety specifically, a priority during my time on the Board.

Improving rail worker safety is on our Most Wanted List of Transportation Safety Improvements. Improving rail worker safety means making sure that roadway workers have the training, equipment, rest, and layers of protection they need while working on or around tracks. It means making sure that crews operating trains carrying hazardous materials have time to escape in case of an accident.

It also means reducing the risks of derailments and collisions as trains are getting longer and heavier. Although rail worker fatalities have declined overall in recent years, we continue to see recurring safety issues in our accident investigations that are 100 percent preventable.

Of particular concern is the continued reliance on train approach warning for roadway workers. Under FRA regulations, train approach warning is a method of establishing on-track safety for workers using a lookout whose sole duty is to watch for approaching trains and equipment. It is susceptible to human error, such as underestimating the time needed for workers to clear tracks.

We have long been concerned with the use of train approach warning as the sole form of worker protection primarily because it lacks redundancy. Trains travel at deceivingly high speeds, and without proper warning, workers may not have enough time to react.

Based on our investigations, we have made recommendations to the FRA to ensure that lookouts have the tools necessary to warn work crews of approaching trains. Likewise, we have recommended that the FRA define when the risks associated with using train approach warning are unacceptable and revise its regulations to prohibit it in those cases. Although dialogue is ongoing, FRA has yet to implement these recommendations.

In 2018, in Bowie, Maryland, a young man, just 21 years old, lost his life in a preventable accident. He was standing in a work zone on an active track in the path of Amtrak train 86, which was traveling at nearly 100 miles per hour. In this case, Amtrak's reliance

on train approach warning resulted in failure to take advantage of the protections that could have been provided by PTC.

In controlled track territory, the risk of roadway workers being struck by a train can be reduced by using working limits or speed restrictions, which would enable the PTC protections. We recommended that Amtrak and all Class I railroads eliminate the use of train approach warning in controlled track territory during planned maintenance and inspection activities.

Mr. Chairman, fatigue decreases a person's alertness and ability to work safely. Currently, FRA hours-of-service regulations are limited to employees directly involved with the movement of a train. However, FRA regulations do not cover roadway workers who are just as critical to ensure safe operations. FRA has indicated it does not have the legal authority to extend these regulations. NTSB disagrees, and we encourage Congress to consider clarifying the agency's authority.

We have also investigated accidents involving high-hazard flammable trains, breached tank cars and fires, placing crews at unnecessary risk by not reasonably separating them from combustibles. In 2017, we recommended that the Pipeline and Hazardous Materials Safety Administration evaluate the risks posed to traincrews to determine the adequate separation distance between hazardous materials and occupied cars to ensure crews are protected during normal operations and accident conditions. FRA should revise its regulations to reflect those findings. In the interim, we recommend that PHMSA require that all trains have a minimum of five buffer cars between any crew-occupied equipment and cars carrying hazardous materials.

The sequencing of cars and a train and controlling train movement continue to be areas of interest in our investigations, not only regarding the safe placement of hazardous materials but also for reducing the risks of derailments and collisions through effectively managing in-train forces.

Mr. PAYNE. Please wrap up.

Mr. CHAPMAN. Mr. Chairman, rail remains one of the safest means of transportation, yet there will always be room for improvement. The safety issues we continue to see in our investigations are tragic because they are preventable. Thank you again for the opportunity to testify.

[Mr. Chapman's prepared statement follows:]

Prepared Statement of Hon. Thomas B. Chapman, Member, National Transportation Safety Board

Good morning, Chairman Payne, Ranking Member Crawford, and members of the subcommittee. Thank you for inviting the National Transportation Safety Board (NTSB) to testify, discuss our freight railroad accident investigations and the lessons we have learned from those investigations, and reiterate how critical it is for our federal, industry, and labor partners, and for the Congress, to heed those lessons learned and take action to help avoid future accidents. Although this hearing is focused on freight rail safety, we are also more than happy to provide the subcommittee with information regarding passenger rail investigations and recommendations as well.

As you know, the NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—highway, rail, marine, pipeline, and com-

mercial space. We determine the probable cause of the events we investigate and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct special transportation safety research and special investigations, and coordinate the resources of the federal government and other organizations to assist victims and their family members who have been impacted by major transportation disasters. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and the United States Coast Guard, and adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not have authority to promulgate operating standards, nor do we certificate organizations, individuals, or equipment. Instead, we advance safety through our recommendations, which are issued to any entity that can improve safety. Our goal is to identify issues and advocate for safety improvements that, if implemented, would prevent tragedies and injuries and save lives.

RAIL SAFETY AND REAUTHORIZATION

Our current authorization expires at the end of this fiscal year. As you know, we have sent Congress a reauthorization proposal that requests resources and hiring flexibility to increase the number of investigators in our Office of Railroad, Pipeline, and Hazardous Materials Investigations (RPH), as well as in our other modes.[1] These resources will allow us to hire professionals with the needed skills, purchase the equipment necessary for those skilled professionals to do their jobs, and invest in staff training and development. Our workforce is our greatest asset and is essential to our mission.

The NTSB is required to investigate any railroad accident in which there is a fatality or substantial property damage, or that involves a passenger train.[2] We must currently meet this mandate with only 15 railroad investigators, two of whom are eligible for retirement. Those 15 investigators are currently working on 22 investigations, and we open about 11 new investigations each year. This office is understaffed. In fact, as part of our reauthorization proposal, we identified a need for 21 additional staff over the next 5 years. Our reauthorization request only fills a portion of this need.

Even if provided with the requested resources and workforce flexibilities, we would be challenged to meet the broad mandate in Title 49 *United States Code* (*U.S.C.*) 1131, given the tragic number of fatalities that result from crashes at highway-rail grade crossings or involving trespassers on railroad property each year. In 2021, 238 people were killed in crashes at grade crossings, and 625 people were killed in trespassing-related accidents. This represents the overwhelming majority of rail fatalities in the United States, and we are grateful that Congress included several provisions in the Infrastructure Investment and Jobs Act of 2021 (IIJA)[3] to address grade crossing and trespasser safety.

Our reauthorization proposal would amend the current mandate so that crashes at grade crossings or accidents involving rail trespassers no longer fall under our investigative mandate. Instead, we would maintain the flexibility to investigate those grade-crossing crashes or trespasser accidents that may provide a significant safety benefit to the public, similar to how we approach highway crashes. In fact, the Board traditionally treats such grade-crossing crashes as highway investigations that include railroad investigators. This change to our mandate would allow us to focus our resources on investigating those accidents and crashes where we can provide the most effective findings and recommendations to improve safety.

For those railroad accidents that we do not investigate, it is important to note that the Federal Railroad Administration (FRA), as the regulator, may still conduct an accident or incident investigation. We have expressed concern in the past that FRA investigations do not use the party process, as we do, to encourage participation from relevant organizations, including employee unions. We have found that union representation brings operations-specific knowledge to the accident investigation team and helps facilitate employee cooperation. As a result, in 2014, we recommended that the FRA include union participation in its accident investigations, seeking congressional authority to allow such participation, if necessary.[4] We appreciate that the IIJA includes a provision to address this issue by requiring the Department of Transportation (DOT) to develop a standard process for its rail accident

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[1] National Transportation Safety Board Draft Reauthorization Act of 2022. Washington, DC: NTSB.

[2] 49 *United States Code (U.S.C.)* 1131(a)(1)(C).

[3] Public Law 117–58.

[4] Safety Recommendation R–14–37.

and incident investigations, including consulting with relevant entities, including employees.[5]

Let me be clear: this does not mean that improving safety on and around tracks and at highway-rail grade crossings is not a priority for the NTSB. As you may know, just last month, we launched a team to investigate a fatal crash involving a Metra passenger train that collided with a truck on the tracks in Clarendon Hills, Illinois. You probably do not know, however, that I have an especially strong interest in this rail safety issue. In the early 1950s, my grandfather, a volunteer firefighter, was struck and killed in a railroad grade-crossing crash. He and a colleague were on a call when the collision occurred. The tragedy had a devastating impact on my mother and her family. My mother was a high school student at the time, and the loss of her father changed the course of her life. Consequently, I have made grade-crossing safety a personal priority during my time on the Board.

MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS: IMPROVE RAIL WORKER SAFETY

Improving Rail Worker Safety is one of the issues highlighted in our 2021–2022 Most Wanted List of Transportation Safety Improvements.[6] Improving rail worker safety means making sure that roadway workers have the training, equipment, rest, and layers of protection they need while working on or around tracks. It means making sure that crews operating trains carrying hazardous materials have time to escape in case of an accident. It also means reducing the risks of derailments and collisions as trains become longer and heavier.

In recent years, we have investigated several railroad and transit accidents where workers have been struck and injured or killed while conducting routine maintenance or switching operations. Other workers are vulnerable when cars carrying hazardous materials are too close to those carrying train crew. We have also investigated accidents where crew have been killed riding on the sides of trains, in violation of rules. Since railroad worker safety regulations were implemented by the FRA in 1997, there have been 466 railroad employee fatalities and 134,850 injuries.[7] Although rail worker fatalities have declined overall in recent years, we continue to see recurring safety issues in our accident investigations that are 100 percent preventable, highlighting the need for better worker protections.

Roadway Workers and Train Approach Warning

The FRA's railroad workplace safety regulations include requirements to protect workers when they are on the tracks and specify railroads' oversight responsibilities.[8] There are several ways to provide on-track safety to roadway workers when their duties require them to foul a track. For example, roadway workers can request protection from the train dispatcher, who will set the signals to prevent trains from entering the work area. Further, if positive train control (PTC) is in effect, the trains will be stopped before entering the designated work areas even if the locomotive engineer fails to do so. The regulations also include the train approach warning (TAW) method for roadway workers who foul a live track for incidental inspections and minor repairs. TAW is a method of establishing on-track safety for roadway workers using a watchperson or lookout whose sole duty is to look out for approaching trains and on-track equipment and provide ample warning time to allow workers to clear to a predetermined place of safety at least 15 seconds before the arrival of a train or other equipment.

Many of the accidents we have investigated have involved TAW, which is susceptible to human errors like miscalculating site distance and underestimating the time needed for workers to clear tracks. We have long been concerned with the risks of using TAW as the sole form of worker protection, especially because it lacks safety redundancy. Trains travel at deceptively high speeds and, without proper warning, workers may not have enough time to react. Additional recurrent issues we see in our investigations are the need to address training, scheduling practices, and briefings. Specifically, lookouts should receive proper training on how to warn work crews of approaching trains and should have the required equipment to perform these duties. Railroads must also develop work schedules and limitations based on science to prevent fatigued workers from being eligible to work overtime. Industry

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[5] Pub. L. 117–58, section 22417.

[6] National Transportation Safety Board. 2021–2022 Most Wanted List of Transportation Safety Improvements. Washington, DC: NTSB.

[7] Bureau of Transportation Statistics. Fatalities and Injuries of On-Duty Railroad Employees. Washington, DC: DOT. Accessed June 1, 2022.

[8] Title 49 *Code of Federal Regulations* 214. Railroad Workplace Safety.

needs to ensure that job briefings are done correctly and that procedures are in place to audit those briefings.

On January 17, 2017, a BNSF Railway train struck and killed two roadway workers, including the watchperson, in Edgemont, South Dakota.[9] The roadway work group had been cleaning snow and ice from the track switch on the main track to prepare for a train that was to have its air brake system tested. The crew of the striking train sounded the train horn and bell and applied emergency braking; however, there was no response from the roadway work group. We found that the probable cause of this accident was the improper use of TAW by the BNSF Railway roadway work group to provide on-track safety.

As a result of that investigation, we made recommendations to the FRA to ensure that lookouts have the tools necessary to warn work crews of approaching trains.[10] In this case, BNSF Railroad did not provide the appropriate equipment to its lookouts, despite being federally mandated to do so. The FRA, for its part, was inconsistently enforcing the regulation. In December 2018, the FRA responded to these recommendations, saying that it disagreed with them and would not take any action. The recommendations remain classified "Open—Unacceptable Response," and we continue to urge the FRA to reconsider its position and take action to protect vulnerable roadway workers.

Not even 6 months after the Edgemont accident, a Long Island Rail Road (LIRR) train struck and killed a roadway worker foreperson who stepped onto active tracks into the path of a train in Queens Village, New York.[11] A five-person crew, including the foreperson and watchperson, were inspecting and making minor repairs to one of four main tracks at an interlocking, using TAW for worker protection. The watchperson had to look for trains moving at nearly 80 miles per hour from both directions on multiple tracks, then warn workers and clear the track within 15 seconds. In this accident, TAW was particularly dangerous for the crew due to several factors, such as there being multiple tracks at the interlocking, trains operating at high speeds in both directions, and the crew having limited areas to which they could clear trains, combined with the additional train traffic due to the Belmont Stakes horse race occurring that day. All these factors created unacceptable risks for the work crew.

We determined that the probable cause of this accident was the LIRR's decision to use TAW to protect the roadway workers on active tracks. We found that TAW regulations do not ensure protection for roadway workers to inspect and work on tracks where trains are allowed to continue to operate, and we recommended that the FRA define when the risks associated with using TAW are unacceptable and revise its regulations to prohibit TAW from being used in those cases.[12] In April 2021, the FRA responded that it disagreed with the recommendation and indicated that it would take no action to revise the regulations. The recommendation is currently classified "Open—Unacceptable Response."

We reiterated this recommendation in September 2021 as a result of our investigation of an April 24, 2018, accident in Bowie, Maryland, where TAW was used for on-track safety.[13] In that accident, an Amtrak train struck and killed an Amtrak rail gang watchperson near the Bowie State Train Station on Amtrak's Northeast Corridor. At the time of the accident, main track 2 was out of service under a continuous track outage for maintenance, and the adjacent tracks immediately to the east and west of main track 2 were in service. Three lookouts were protecting the roadway workers and watching for trains moving on adjacent tracks. One watchperson was positioned near the boarding platform, another was positioned in a nearby curve, and the third was positioned toward the end of the curve, near a work gang of welders. The third watchperson was struck by the train.

In the Bowie accident, Amtrak's use of TAW circumvented the protections that could have been provided by PTC. One of the specific requirements of PTC is to protect workers and equipment on the track. TAW does not use working limits or speed restrictions and, therefore, gets around the protections that would be provided by PTC in controlled track territory.[14] For a PTC system to protect roadway workers, a roadway worker-in-charge of on-track safety for a work group must establish

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[9] NTSB. *BNSF Railway Roadway Worker Fatalities, Edgemont, South Dakota, January 17, 2017*. Washington, DC: NTSB. RAR 18/01.

[10] Safety Recommendations R–18–16, –17, –18, and –19.

[11] NTSB. *Long Island Rail Road Roadway Worker Fatality, Queens Village, New York, June 10, 2017*. Washington, DC: NTSB, RAR 20/01.

[12] Safety Recommendation R–20–6.

[13] NTSB. *Amtrak Roadway Worker Fatality, Bowie, Maryland, April 24, 2018*. Washington, DC: NTSB, RAR 21/02.

[14] *Controlled track* means track upon which the railroad's operating rules require that all movements of trains must be authorized by a train dispatcher or a control operator.

working limits with the train dispatcher. When working limits are established, the PTC system prevents incursions into that segment of track. Alternatively, temporary speed restrictions can also provide protection. When a temporary speed restriction is placed on the track by the dispatcher, PTC enforces that speed restriction.

In controlled track territory, the risk of roadway workers being struck by a train can be reduced by using working limits or speed restrictions, which would enable PTC protections. We concluded in the Bowie investigation that, had Amtrak established working limits or speed restrictions on the adjacent tracks that enabled the protections available under PTC rather than relying on the use of TAW, the accident may have been prevented. Besides reiterating our recommendation to the FRA to revise its regulations, we recommended that Amtrak and all Class I railroads eliminate the use of TAW protection in controlled track territory during planned maintenance and inspection activities.[15]

The Bowie accident and others also highlight gaps in PTC implementation, including risks of incursions by trains into work zones. Requiring PTC only on certain tracks and allowing exceptions to the rules creates unnecessary risk. We are currently conducting a focused safety research report to specifically examine these issues.

Coverage of Roadway Workers Under Hours-of-Service Law

Fatigue decreases a person's alertness and ability to work safely. The lookout and foreperson in the Queens Village accident were likely fatigued because they had worked consecutive overtime shifts. The lookout had worked and commuted for 38 of the 50 hours before the accident, and the foreperson had been on duty for the same length of time. This schedule did not allow either of them the opportunity for restorative sleep in the two nights before the accident.

An agreement between the LIRR and its roadway worker labor union, SMART Transportation Division, Local 29, allowed LIRR track workers to take overtime shifts based on their skill and seniority, but without considering other important factors, such as fatigue. This agreement exposed employees and the public to unnecessary risk. In the Queens Village investigation, we found that, had the LIRR used biomathematical models of fatigue avoidance to develop work schedules and approval processes for roadway workers, the foreperson's and lookout's likely fatigue would have been avoided, and their overtime work requests for the day of the accident would have been denied.

Currently, the FRA has hours-of-service regulations that cover service positions and certain employees involved with the movement of a train, including operators, dispatchers, and signal employees. The regulations do not, however, classify roadway workers as personnel in covered service positions and do not, therefore, limit their on-duty time. Consequently, there are limited or no safety controls from the FRA or railroads beyond union agreements and local work practices that limit roadway workers' maximum work hours and ensure adequate opportunities for needed sleep. Because roadway workers' duties often affect the movement of a train and could possibly create unnecessary safety risks for employees and the traveling public, we have recommended that the FRA promulgate scientifically based hours-of-service requirements for roadway workers.[16]

The NTSB believes the FRA has the legal authority, under 49 *U.S.C.* chapter 211, to apply hours-of-service requirements to roadway workers, as it does with all its service positions. However, in April 2021, the FRA told us that it disagrees. Although we maintain that FRA already has the required legal authority, we believe that Congress should consider clarifying the agency's authority in this regard.

Train Crews and High-Hazard Flammable Trains

The NTSB has also investigated accidents involving high-hazard flammable trains (HHFTs) that resulted in breached tank cars and hazardous material fires, increasing the risk of death and injury to crewmembers.[17] In several accidents, we have seen that there was not enough separation between cars carrying hazardous materials and those on which crewmembers were serving. We have also seen issues with placing older tank cars in trains with other cars carrying flammable liquids. In HHFT accidents, freight train crews may survive collisions and derailments only to be injured or killed by hazardous materials released subsequently. A crew involved in a locomotive collision may experience injuries that would limit their ability to

[15] Safety Recommendation R–21–5.
[16] Safety Recommendation R–20–7.
[17] A high-hazard flammable train is defined in Title 49 *CFR* 171.8 as a single train transporting 70 or more loaded tank cars containing Class 3 flammable liquid.

rapidly exit the locomotive, thereby increasing their risk of injury from hazardous material release or fire. We have made recommendations to industry, the FRA, and the Pipeline and Hazardous Materials Safety Administration (PHMSA) to address these risks.

Rail tank cars are built to certain DOT or industry specifications.[18] The Fixing America's Surface Transportation (FAST) Act phased out legacy DOT–111 specification tank cars for transporting certain flammable liquids, such as crude oil, and the cars continue phasing out service for certain other commodities, such as ethanol. By May 1, 2023, nonjacketed and jacketed DOT–111 tank cars must be phased out; nonjacketed CPC–1232 tank cars must be phased out by July 1, 2023; and jacketed CPC–1232 tank cars must be removed or retrofitted by May 1, 2025. Each of those tank cars must be either removed from flammable liquids service or retrofitted with prescribed protective features, such as a head shield, jacket, and thermal protection.

In December 2020, we released a safety recommendation report based on findings from investigations into two HHFT derailments.[19] The first occurred on April 24, 2019, in Fort Worth, Texas, when a Union Pacific Railroad unit train carrying denatured ethanol derailed 25 of the 96 loaded tank cars.[20] Three tank cars, including one severely damaged legacy DOT–111 tank car, were breached and released 65,270 gallons of denatured ethanol, which ignited and formed pool fires. Some of the released ethanol entered a tributary of the Trinity River. The local police evacuated nearby homes, and, fortunately, no individuals were injured; however, three horses in a barn were killed, and three were injured.

The second accident occurred on February 13, 2020, when a CSX Transportation unit train also carrying 96 loaded tank cars of denatured ethanol derailed three locomotives, one buffer car, and four tank cars on a mountainside near Draffin, Kentucky.[21] Two of the derailed DOT–111 tank cars were breached and released 38,400 gallons of denatured ethanol, which, along with diesel fuel from the locomotives, ignited, engulfing the locomotives and the second and third tank cars. The train crew escaped from the burning lead locomotive by jumping into the river, where they were rescued by emergency responders.

As noted in our report, generally, cars positioned at the rear of a train have a lower probability of being derailed and, therefore, a lower probability of being breached by mechanical damage. In both the Fort Worth and Draffin accidents, the breached DOT–111 tank cars were positioned in the front third of the train, putting them at greater risk of derailing in an accident, even though the trains' more robust, puncture-resistant DOT–117J specification tank cars could have been positioned in the front third of each train to decrease the risk of flammable hazardous material releases. In addition, the DOT–111 baseline legacy tank cars could have been placed in the lowest-risk positions for exposure to derailment or collision—and far away from occupied locomotives. In response to recommendations we made, the Renewable Fuels Association updated its Best Practices for Rail Transport of Ethanol guidance with the suggested best practice of placing DOT–111 and DOT–117 tank cars in a train consist.[22] As long as DOT–111 tank cars remain in service, we continue to urge shippers and carriers to reduce risks by adopting placement strategies that account for tank car type.

Although PHMSA requires buffer cars between train crews and hazardous materials, the agency has also issued a regulatory interpretation that provides for a much shorter distance between them. In 2017, we recommended that PHMSA evaluate the risks posed to train crews by hazardous materials transported by rail, determine the adequate separation distance between hazardous materials cars and occupied cars to ensure train crews are protected during both normal operations and accident conditions, and collaborate with the FRA to revise the regulations to reflect those findings.[23] That recommendation is currently classified "Open—Acceptable Response," as PHMSA has initiated a research project in coordination with the John A. Volpe National Transportation Systems Center to address the issue. We understand that the Volpe Center is in the process of finalizing a report. In the meantime, we recommended that PHMSA withdraw its regulatory interpretation and require that all trains have a minimum of five buffer cars between any crew-occupied equip-

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[18] Bureau of Transportation Statistics. Tank Car Specifications and Terms. Washington, DC: DOT. Accessed June 1, 2022.

[19] NTSB. *Placement of DOT–111 Tank Cars in High Hazard Flammable Trains and the Use of Buffer Cars for the Protection of Train Crews*. Washington, DC: NTSB, RSR 20/01.

[20] *Union Pacific Railroad Derailment with Hazardous Materials Release and Subsequent Fire, Fort Worth, Texas, April 24, 2019*. Washington, DC: NTSB, RAB 21/03.

[21] NTSB. *Derailment of CSX Transportation Train K42911, Draffin, Kentucky, February 13, 2020*. Washington, DC: NTSB.

[22] Safety Recommendation R–20–27.

[23] Safety Recommendation R–17–1.

ment and cars carrying hazardous materials, regardless of train length and consist.[24] PHMSA has responded that it does not plan to take this interim action, and the recommendation is classified "Open—Unacceptable Response."

Train Handling and Operational Practices

The 2017 recommendations we made to PHMSA came as a result of our investigation of a 2013 derailment and subsequent collision in Casselton, North Dakota, in which a BNSF train carrying grain derailed 13 cars onto an adjacent track, where they were then struck by another BNSF train. The striking train derailed two head-end locomotives, a buffer car, and 20 cars loaded with crude oil.[25] Following the collision, the crew of the oil train narrowly escaped the area before the locomotives were destroyed by the eruption of a postaccident fire and energetic fireballs.

The operational practices of sequencing rail cars in a train and controlling train movement continue to be areas of interest in our investigations, not only regarding the safe placement of hazardous materials, but also for reducing the risks of derailments and collisions through effectively managing in-train forces. We have investigated accidents where operational practices[26] and training and oversight of operating crew[27] did not sufficiently provide for safe operation.

We have also investigated accidents in freight rail where use of available technology would mitigate risks. For example, another issue that our investigators looked into as part of the Casselton investigation was the performance of various train braking types, particularly electronically controlled pneumatic (ECP) brakes. ECP brakes are the most advanced train braking systems available for the freight rail industry today. Unlike conventional or distributed power systems, ECP brake systems simultaneously send an electronic braking command to all equipped railcars in the train. In general, our research has found that ECP brakes out-perform other braking systems in stopping distance and energy dissipation during derailments, but we have not made any recommendations in this area. In May 2015, PHMSA issued a final rule to require HHFTs to operate with ECP braking capability requirements; however, in September 2018, PHMSA, in coordination with the FRA, rescinded the rule and eliminated the requirement for ECP brakes.

Our investigation of the October 4, 2018, fatal collision between two Union Pacific trains in Granite Canyon, Wyoming, found that the accident could have been prevented had the train been equipped with an ECP braking system.[28] This collision occurred when the air brakes on an eastbound UP freight train failed while the train descended a hill. The striking train, consisting of 3 locomotives and 105 railcars, collided with the rear of a standing UP freight train at about 55 mph, causing the lead locomotives of the striking train and railcars of both trains to derail. The locomotive engineer and conductor of the striking train were killed.

We found that the length of the train, curvature of the track, and obstructions due to physical terrain contributed to a loss of communication between the head-of-train device (HTD) and the end-of-train device (ETD) on the striking train. Normally when emergency brakes are applied, in addition to venting the air brake pipe on the lead locomotive, the HTD in the lead locomotive transmits a radio message to the ETD at the rear of the train to initiate an emergency brake application and vent the air brake pipe to atmosphere at the rear of the train at the same time. In this accident, the locomotive engineer of the striking train applied the emergency brake as the train descended; however, the train's speed continued to increase. After the emergency brake application, the crew received a "front-to-rear no communication" message indicating the emergency brake request was not received at the ETD. With an ECP brake system, the emergency brake commands would have been received through the entire train, thereby applying the brakes on each railcar.

Current FRA regulations allow 16 minutes and 30 seconds to elapse before the engineer is alerted that communication with the ETD has been lost. We recommended the FRA require more frequent communication checks between the HTD

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[24] Safety recommendation R–17–2.

[25] NTSB. *BNSF Railway Train Derailment and Subsequent Train Collision, Release of Hazardous Materials, and Fire, Casselton, North Dakota, December 30, 2013*. Washington, DC: NTSB, RAB 17/01.

[26] NTSB. *CSX Train Derailment with Hazardous Materials Release, Hyndman, Pennsylvania, August 2, 2017*. Washington, DC: NTSB, RAR 20/04.

[27] NTSB. *BNSF Railroad Collision, Kingman, Arizona, June 5, 2018*. Washington, DC: NTSB, RAR 21/01.

[28] NTSB. *Collision of Union Pacific Railroad MGRCY04 with a Stationary Train, Granite Canyon, Wyoming, October 4, 2018*. Washington, DC: NTSB, RAR 20/05.

and ETD, and that emergency brake signals continue to transmit until to address this vulnerability.[29]

I want to thank you for your efforts to address these issues in the IIJA, specifically the provision requiring the DOT to seek to enter into an agreement with the National Academies of Science to study the impact that train length has on safety, including loss of communication between the ETD and locomotive cab and braking performance.[30] In addition, the provision[31] requiring the FRA to collect more data on its Rail Equipment Accident/Incident Report regarding the number and length of cars as well as the size of the crew on involved trains (the latter of which addresses a recommendation that we made following the 2015 derailment of Amtrak 188 in Philadelphia)[32] will help us understand if further safety improvements are needed following accidents.

CONCLUSION

Although rail remains one of the safest means of transportation, our investigations have found that railroad safety can be improved with operators, labor unions, government oversight agencies, and local communities sharing responsibility. The safety issues we continue to see in our investigations are tragic because they are preventable.

We urge the FRA and PHMSA, as the regulators, to act now on our recommendations to establish adequate roadway worker and operations crew protections. If they do not address these deficiencies, we will continue to see more accidents and incidents resulting in preventable worker deaths and injuries. However, industry does not need to wait for those agencies to act to protect workers. Eliminating the use of TAW where the risks are too high, not allowing workers to be on the job without adequate opportunity for rest, and reducing the potential for train crews to be exposed to the hazards of highly flammable materials will help prevent these accidents and save lives.

We recognize the progress that has been made; yet there will always be room for improvement. The NTSB stands ready to work with the Committee to continue improving rail safety. Thank you again for the opportunity to testify today. I am happy to answer your questions.

Mr. PAYNE. Thank you.

We will now move on to Member questions. Each Member will be recognized for 5 minutes, and I will start with myself.

Administrator Bose, in 1974, FRA began its automated track inspection program. Just a few years ago, the Class I railroads began operating automated track inspection, or ATI, test programs. Four of those ATI test programs continue today. Are the technologies operated under those ATI test programs prohibited by the current FRA regulations?

Mr. BOSE. Mr. Chairman, no.

Mr. PAYNE. OK. Yesterday, FRA finalized a rule on Fatigue Risk Management Programs that we required in 2008. Can you please share with the committee how you plan to ensure railroads' plans seriously tackle fatigue, a known but persistent safety threat?

Mr. BOSE. Thank you for the question, Mr. Chairman. Fatigue is definitely an issue that FRA focuses on. As you know, safety is FRA's priority. And, when it comes to fatigue, it is also about hours of service and rest, and we know that the cognitive abilities of railroad workers are very, very important.

So, when it comes to fatigue, we want to make sure that we are looking at the whole picture, and we think the Fatigue Risk Management rule will help us address those. Another important compo-

[29] Safety Recommendations R–20–28 and –29.
[30] Pub. L. 117–58, Section 22422.
[31] Pub. L. 117–58, Section 22421.
[32] Safety Recommendation R–16–33.

nent of that is the consultation with workers that we expect to happen in a robust, comprehensive way.

Mr. PAYNE. OK. So, you definitely see the issue around fatigue continuing to plague the safety of the overall system?

Mr. BOSE. Yes, sir.

Mr. PAYNE. OK. All right. Thank you.

I now recognize Mr. Crawford for 5 minutes.

Mr. CRAWFORD. Thank you, Mr. Chairman.

I want to direct this question to Administrator Bose. Automated track inspection safety technology has been developed for years with the unwavering support of the FRA. ATI has been shown to help reduce freight rail accidents and identify safety risks that manual inspections may not spot. ATI is also meant to complement—not to replace—manual inspections and can free up inspectors to focus on other important safety duties.

Given the clear proven benefits of ATI for freight rail safety, why has the FRA suddenly decided to deny petitions to continue testing ATI technology?

Mr. BOSE. Thank you for the question, Congressman. I am limited in some of my responses because the issue is in litigation, as you know, and there is also petition for reconsideration. But I am going to make some factual statements because I want to answer your question to the extent that I can.

First, prior to my arrival at FRA, those test programs that you talked about didn't seek public comments. It wasn't a transparent process. We have cleared that up. We are going forward. We made sure that it is a transparent process so that we can get comments in that.

Second, railroads can use ATI without FRA test programs, without waivers. Like you said, ATI can catch things that visual inspections can't. Visual inspections can catch things that ATI can't, such as roadbed vegetation, tie condition, track deponent defects. And those are really, really important parts of track inspections that I just wanted to highlight.

We continue the four test programs. We are going to get data from those, Congressman, and we are going to use that data to see how to go forward. The Railroad Safety Advisory Committee is also looking at this. We want to do this in a collaborative way, and they are looking at the issue directly, and hopefully we can reach a consensus on a path forward.

Mr. CRAWFORD. As I indicated in my question, ATI is meant to complement, not replace manual inspection, so, I think the two can work together in a complementary fashion. But let me move on.

During the Obama administration, FRA released a proposed rule to require a Class I freight rail to operate with two people in the cab of a locomotive. FRA noted it could not, quote, "provide reliable or conclusive statistical data to suggest whether one-person crew operations are generally safer or less safe than multiple-person crew operations," end quote.

The Trump administration then withdrew that rulemaking, recognizing a lack of safety data to justify its implementation. Given plans to now revive the two-man crew rule, is there any new data to support a safety justification for this rule?

Mr. BOSE. Congressman, as we have put out publicly, the draft proposed rule is in review right now, and it is going to address the things that you brought up. We know that, in the past, data has been a concern. We have heard about it in my 1½ years at the FRA. We want to make sure that the proposed rule that we have gets a robust set of comments so that we know what stakeholders are saying about the rule and the public is saying about the rule. We definitely want to address the risks associated with less than a two-person crew.

Mr. CRAWFORD. Well, let me just say that I have some concerns about this. It is possibly that the administration may just be filling another campaign promise to labor unions. I mean, we are suffering from the worst inflation we have seen in 40-plus years, and now we are talking about increasing labor costs, the brunt of which are borne downstream by the consumer.

So, I want to make sure that whatever rulemaking we are engaging in is actually based on real safety concerns and not just fulfilling promises to unions on the part of the administration. The reality is that it was withdrawn under the previous administration for that very reason, because there was no empirical evidence that suggested that there was greater safety with multiple-person crews. And so, I just want to make sure that, going forward, that that is the primary consideration is safety and not promises to particular stakeholders that were made during a campaign.

And, with that, I yield back.

Mr. PAYNE. The gentleman yields back.

And, with all due respect to my colleague, Class I's primarily run two-man crews now, so, there would be no major increase in labor costs.

Next we will hear from the gentleman from New Jersey, Mr. Malinowski.

Mr. MALINOWSKI. Thank you, Mr. Chairman.

It is good to see you, Administrator Bose. Congratulations on your confirmation and thank you in particular for all your work on the Gateway project, both before you took this job and today. You and I toured the existing Hudson Tunnel with Secretary Buttigieg last summer, and I know you have been a champion of this project, which thankfully now is funded under the bipartisan infrastructure bill, and I look forward to working with you to get it over the finish line ahead of schedule and under budget. That is the challenge before us today.

I want to get right back to the topic that the ranking member raised. June of 2019, your predecessor was sitting in that chair, and I asked him what I thought were some pretty straightforward questions about the length of trains and crew sizes. So, I asked him, should we have 3-mile-long freight trains? Should we have 5-mile-long freight trains? Should we have 10-mile-long freight trains?

I asked him: Let's say you have a 3-mile-long train operated by one crewmember and the train breaks down, how long would it take for that single crewmember to walk from the front of the train all the way to the back of the train to try to figure out what was going on as first responders try to get around the train, and, in

some cases, entire communities are simply divide in half? And Administrator Batory said: Well, it might take 2 hours, 3 hours.

Then he added: It depends on if he is a good walker or not.

I don't know if that qualifies as data, but actually it kind of does make sense. I mean, isn't it just common sense that there are safety concerns related to a very long train with one human being on the train? Trains break down. No matter how good the technology is, at the end of the day, you are going to need a person or people to be able to figure out what went wrong and to fix it and ideally to prevent the thing from going wrong in the first place. Would you agree?

Mr. BOSE. Congressman, absolutely. And I will tell you something, when I came to FRA, that was sort of amazing to me was that FRA was not measuring train length in accidents and investigations. We have changed that because it is always about the data we hear, so, we are now taking stock of the size of trains. And, like you also said, training is an important part of that. Communication between the different parts of the train is an important component of that. So, train length brings a whole host of issues that are now things that we have to address in a holistic way.

Mr. MALINOWSKI. OK. Thank you so much.

Switching gears, or maybe switching tracks, I want to quickly reaffirm my support for a few grant applications from New Jersey Transit that are currently under review at FRA. The first, Mega Program grant to enhance 69 commuter rail and bus stations across New Jersey and New York; second, a State of Good Repair grant for the Tonnelle Avenue right-of-way bridge, which is part of the Hudson Tunnel project; third, a State of Good Repair grant for improvements to Newark Penn Station, as well as for planning and preconstruction activities for the Hunter Flyover. I hope for full and fair consideration at FRA. I look forward to hearing back from you soon on those.

And I want to particularly ask you about the Hunter Flyover. I am sure you are familiar with that project from your previous work. It is critical to one of the main commuter railways in my district, the Raritan Valley Line. I wonder if you might offer some thoughts about the importance of that project.

Mr. BOSE. Congressman, anytime we can make improvements on rail, and particularly known spots like that one, we absolutely want to. And we know that the grant programs that the bipartisan law enabled and the projects, the opportunities that it presents are going to lead to increased safety outcomes and also better capacity and also more opportunities to increase ridership. So, projects of that nature are the things that, again, the Bipartisan Infrastructure Law, just a year ago, it wasn't even possible, and now there is an endless amount of possibilities.

Mr. MALINOWSKI. Thank you so much.

I yield back.

Mr. PAYNE. The gentleman yields back.

We will now hear from the gentleman from Illinois, my friend, Mr. Davis.

Mr. RODNEY DAVIS OF ILLINOIS. Thank you, Mr. Chairman. I love that suit today, too. I have got to get me one of those.

First off, my first question is going to be for Administrator Bose. In December of 2019, your predecessor, Administrator Batory, launched the blocked rail crossing incident reporter for public and law enforcement to report blocked highway-rail grade crossings. And the goal of the program was to address blocked crossings through identifying chronic problems and working to address the underlying issues.

While blocked crossings occur in every corner of America, in my district, we are having issues in the communities of Bement and Decatur that I urge you to work with all parties to address. My staff has consistently referred constituents to the FRA's incident reporter, and so far, 235 reports have been filed in Bement and 197 reports have been filed in Decatur since the tools launched.

In these municipalities, trains block crossings for hours and sometimes days at a time. The communities are literately divided. Emergency response times are slowed, access to schools cut off, and frustrated citizens consistently have their lives disrupted. What is the FRA doing with the data collected, and what steps are being taken to further address blocked crossings?

Mr. BOSE. Congressman, thank you for that question. And I wish your communities didn't experience those blocked crossings.

At FRA, what we do with that data is we look at it very closely, to the extent that we can reach out to the railroad companies directly and share that data with them, let them know that we are hearing a lot of complaints from that specific area, and talk to them about operational changes that they can make, improvements that they can make.

Also, now, again, with the grant programs that we have, if we need to grade separate, we talk about those opportunities as well. But the contact with the community and our constant back and forth with the community and the railroads is very, very important. So, we want to facilitate those conversations, and we want to make sure that we can reach a conclusion, a positive outcome collaboratively.

Mr. RODNEY DAVIS OF ILLINOIS. Are these numbers high compared to other communities?

Mr. BOSE. They are high.

Mr. RODNEY DAVIS OF ILLINOIS. OK. On another issue in my district, we have consistently had the worst on-time service for the Saluki Express and the Illini Express Amtrak routes in central, eastern, and southern Illinois. Can you give me any update on what is being done to address those issues on those lines? Has the FRA heard anything from the rail lines or from Amtrak?

Mr. BOSE. Yes, Congressman. I am glad you asked about that. We now have quarterly metrics and standards reports that we get reports on on-time performance, and we are now at a point where we have had consistent quarterly reports where we can look at next steps. And I know Amtrak is looking at next steps to address those issues in a comprehensive manner.

As you stated, these lines are well known to have had years and years of continuous delays, and now we think we have the tools in our toolbox necessary to move forward in a positive direction to address those. And, again, our funding programs, if there are issues with specific places that need sidings, that need improved grade

crossings, we have the ability to fund those projects, so, let's address them together and move forward so that there are no delays.

Mr. RODNEY DAVIS OF ILLINOIS. I appreciate that. Are the tools you are talking about tools to address the short shunt issue on those particular lines?

Mr. BOSE. Yeah, the short shunt issues are things that we are looking at actively right now with Amtrak, with Canadian National in particular. And we have been looking very, very closely at them, and we think that there has been some very positive movement.

Mr. RODNEY DAVIS OF ILLINOIS. Well, I appreciate your optimism, but forgive me for being somewhat of a pessimist because I have had this same conversation for years now, and I get a lot of positive talk that we are all working together, but I don't see the improvement to fix the short shunt issue on those particular lines.

And I said it the last time your predecessor was here and the Amtrak CEO was here and anyone related to this particular problem, we have got to see results, and, frankly, until we see results, we are going to continue to push and put more pressure to help our constituents.

And I appreciate your time today. Thank you for your responses.

I will yield back the balance of my time.

Mr. PAYNE. We will now hear from the gentleman from Massachusetts, Mr. Moulton.

Mr. MOULTON. Mr. Chairman, thank you very much. It is an honor to be here.

Gentlemen, a big topic of conversation these days in the freight rail world is Precision Scheduled Railroading. And it seems to me that PSR affects a variety of constituents. It affects customers, our shippers, the employers of businesses that rely on rail transportation. It affects citizens who benefit from shipping more goods by rail, like literally everyone whoever gets on a highway or a road and encounters a truck.

It affects railroad employees and most specifically their safety. Speaking of safety, the American public, of course, is affected by railroad safety. It affects railroad infrastructure writ large, how much money railroads are pouring into improving their infrastructure or whether it stays the same. PSR affects Wall Street shareholders, and I would even add that it affects Hunter Harrison's legacy.

But it seems to me that, on that long list, customers, American citizens, railroad employees, railroad infrastructure, Hunter Harrison, and Wall Street, the only beneficiary from PSR has been Wall Street. I don't even think Hunter Harrison's legacy will come out looking good in the long run here.

So, I would like to ask a few questions about this. We have seen in recent days hiring plans at railroads right now focused on running more trains trying to address the capacity problem, but maintenance positions are completely stagnant. Since railways drastically started reducing headcount in 2016 due to PSR and an obsession with raw operating ratios, collision rates have been stagnant despite purported technological advances in safety, and we don't see more maintenance-of-way employees coming back to work.

Administrator Bose, Mr. Chapman, either of you can answer this, is there a connection here, and what are we going to do to get the railroads better maintained?

Mr. CHAPMAN. Let me say first, from a safety standpoint, we are certainly aware of the concerns, the PSR concerns. We have not investigated any accidents that were specifically related to PSR, but the issues that folks have expressed concerned about—fatigue, external issues, training, oversight, makeup of trains—those are issues that we would look at in any accident investigation.

So, it is on our radar to the extent that the concerns that people are expressing might be a factor in a particular accident. We have had no accident investigations that were specifically related to PSR.

Mr. BOSE. Congressman——

Mr. MOULTON [interrupting]. Mr. Chapman, have derailments been on the rise?

Mr. CHAPMAN. I am sorry?

Mr. MOULTON. Have derailments been on the rise?

Mr. CHAPMAN. Let me check on that number. We will get you a number here in just a minute. I don't believe that they are on the rise.

Mr. MOULTON. What about train breaks, trains breaking apart, have they been on the rise?

Mr. CHAPMAN. I am not aware that we have seen a pattern in that regard.

Mr. MOULTON. Well, I think we better check into that, because I have heard from several railroad officials that that is exactly the case, and it is striking to me that you would not know.

Administrator Bose?

Mr. BOSE. Congressman, as you know, safety is FRA's priority, and PSR is a term that encompasses many different aspects of safety and operations. I can assure you that FRA is looking at the operational and process changes that seem to have resulted from the railroad's implementation of what is called PSR.

We know that the operation of fewer, longer trains without the technology and training to support such operations could affect safety, along with the removal of mechanical forces that allows traincrews to perform mechanical inspections. And we know that technology replacing the workforce with technology that is not as effective may not lead to good outcomes, and we are even looking at things like ineffective job briefings.

So, we have to look at all of this in a holistic way, including hours of service, fatigue, and training. So, I want to assure you that we are on the job here looking at things to make sure that safety is paramount.

Mr. MOULTON. Well, Administrator Bose, it is not just safety; it is about service. It is about the safety of our highways because a lot of customers are shifting traffic to trucks because they can't get the service that they need from the common carrier railways.

And, Mr. Chapman, I think that Mr. Bose's statement there was a sort of long, technical way of saying that we better look into train breaks and derailments because I think we will find that they are absolutely on the rise and they are related to longer trains.

Thank you, Mr. Chairman. I yield back.

Mr. PAYNE. The gentleman yields back.

We will now her hear from the gentleman from Illinois, Mr. Bost, for 5 minutes.

Mr. BOST. Thank you, Mr. Chairman.

Administrator Bose, you have emphasized the importance of the role that innovation would play in reaching FRA's safety goals. Now, I am sure that as technology evolves and our Nation innovates, it is important to use the most up-to-date information and data to make decisions. Will you make a commitment today to using the most up-to-date data when making decisions about the use of new technology, and will you commit to sharing with this committee the data to make those decisions once the FRA has decided it?

Mr. BOSE. Yes, sir.

Mr. BOST. And, in April, the Biden administration announced a trucking action plan in an attempt to help the industry. During the same month, the Secretary called for railroads to improve their current self-service levels, which are similarly being impacted by the Nation's challenge to recruit and retrain qualified employees.

However, FRA has not acted with the same urgency to help railroads address these workforce challenges. Why have you not taken steps for rail to address those concerns, and what if any specific steps has the Biden administration or DOT taken to address workforce shortages in the rail industry?

Mr. BOSE. Congressman, first, I just want to lead off with the railroads and their workforce have been instrumental in helping us get through the pandemic and the jobs that they have done throughout this time.

We know that there have been backups on the supply chain. I point you to the April 27 Surface Transportation Board hearing where there was an earful said about the supply chain issues that the railroads are facing. The Surface Transportation Board is looking at it very closely. Just yesterday, they issued an order because the railroads didn't provide sufficient data and didn't answer the questions that the Surface Transportation Board asked in terms of reporting. So, we need to continue to get accurate information to see what is going on in the first place.

When you mentioned worker shortages, that is a perennial issue that has developed in recent years because of cutbacks that the railroad companies have made themselves. Now, I am not in the business of them operating and hiring workers or removing workers, but the railroads themselves have said that there is a worker shortage.

We want to make sure that the workers that they retain and bring on board have a safe workplace, have a good workplace so that they can retain those workers, and those workers can continue and make railroading their career, their life's ambition, and also a safe workplace. We want to make sure of that.

In terms of supply chain, just quickly, Congressman, I know my time is short, the President established a Supply Chain Disruption Task Force. The Secretary is a part of that. The Port Envoy, General Lyons, was just appointed a couple of weeks ago. He works closely with the FRA to address any challenges that we see on the supply chain having to do with rail. And we also work coopera-

tively with the railroad companies themselves to facilitate anything that they need from us to help them move the supply chain and leave those disruptions behind.

Mr. BOST. Yeah, the only thing I disagree with you on is the fact that you would say the railroads—that they cut their workforce. I have been talking with them; they are having trouble recruiting and getting engineers and workers back after COVID like other industry.

Now, the concern I have is the same thing that I have in the trucking industry, which is the industry I came from. When we are trying desperately to recruit new employees, safety is vitally important. And, with safety, we implemented it both in trucking and rail and other heavy equipment that certain safety tests are given that would check your blood alcohol level and/or any drug level.

And I believe that we are having several States right now that have legalized marijuana, and with alcohol, it only takes about 8 hours to process out to a safe level. With marijuana, we end up with a test that we have, all of a sudden we have these new employees popping positive and/or not being able to pass a drug test at all. And, with that, we are losing valuable employees that we should have.

And I think it is a concern that we should look into on the national level, though we don't want to violate the 10th Amendment. Still, many of these States are putting us in situations where we are having trouble recruiting for these type of jobs. I appreciate your input on this.

And, with that, I yield back.

Mr. PAYNE. The gentleman yields back.

We will now have Mr. García from Illinois for 5 minutes.

Mr. GARCÍA OF ILLINOIS. Thank you, Chairman, for holding this hearing on freight rail safety.

And thank you to our witnesses on both panels for appearing today.

My first question is for Mr. Bose of the FRA. In your testimony, you note some of the recent actions that the FRA has taken to address fatigue among railroad employees and advance traincrew staffing safety requirements. I applaud these actions and your leadership, but more action, of course, is needed to address the harm to workers from Precision Scheduled Railroading, including the increased safety risk workers are facing as a result of PSR.

Many of the labor representatives testifying on the second panel have highlighted other issues that need to be addressed. These issues include the lack of time for carmen to inspect cars, railroad scheduling and attendance practices like Hi-Viz that lead to more fatigue among workers, and a lack of protections for railroad workers performing track work.

What is the FRA doing to address these issues, and how is the FRA in general working with labor unions and railroads to address railroad employees' concerns about the effects of PSR?

Mr. BOSE. Thank you for that question, Congressman. This is definitely an issue we hear a lot about, especially due to the attendance policies that some of the railroads have instituted over recent times. When it comes to fatigue, FRA has instituted a couple of things that I want to share. When it comes to any accident in-

vestigation that involves human factors as a possible cause of the accident, we collect information about fatigue. We also put out a survey at the beginning of this year where we got upwards of 10,000 comments from specifically conductors and engineers about their experiences with fatigue and hours of service. So, we are analyzing that data right now.

In addition, I have also reminded the railroads when it comes to their attendance policies that rest away from home is not the same as rest at home, and you can't in perpetuity be away from home and be properly rested.

In addition to that, Congressman, one more aspect of what FRA does, we are also continuously looking into research and conducting research about fatigue and its impact on workers. So, we are addressing it in many ways, but I get your broader point that it is a very important topic that we need to address on a continuing basis here and now.

Mr. GARCÍA OF ILLINOIS. Thank you for that. I want to squeeze two more questions in, so, your brevity would be much appreciated.

Blocked railroad crossings are a big issue in my district as well. You mentioned in your testimony that you are planning to do outreach to local communities to get their input as you update FRA's blocked rail crossing portal. Can you expand on this outreach, what it looks like, and how my local communities can give you input if they would like to? And are you planning to do any visits to locations with a lot of blocked crossings like Chicago to meet with local communities and residents?

Mr. BOSE. Congressman, a couple of things there. We just put out a request for information on ways to make our portal even better for blocked crossings. So, I urge your communities to provide input through that process.

The second thing is the Railroad Crossing Elimination Program in the Bipartisan Infrastructure Law that you supported, we are going to go out with a notice of funding opportunity and also in that do webinars for communities so that they can apply for funding. So, those are two ways of doing it.

FRA has had offices based in communities throughout the country, in Illinois is an example. So, we have field personnel spread throughout the country, and they are always available to talk to your communities. And I will follow up with your office directly to make sure that they contact and speak to your communities and get that input directly.

Mr. GARCÍA OF ILLINOIS. Thank you. Thank you. I want to squeeze my last question in.

Mr. Cothen's testimony makes a compelling case that the FRA must take a more active role in overseeing the railroad's management of physical forces on a train as it moves. Railroads are blaming human error and other miscellaneous causes when they report train derailments to the FRA, but oftentimes it is incorrect decision of the railroad to make up equipment of a train that leads to its derailment. The improper coding gives an incorrect picture of the causes of train derailments.

So, what action is FRA taking to hold railroads accountable, and what is the FRA doing to better identify the causes and ensure that codes appropriately reflect the circumstances or derailments?

Mr. PAYNE. Quickly.

Mr. BOSE. Congressman, we are going to improve our coding. Just so you know, we are aware of Mr. Cothen's paper. He definitely shared it with FRA, and I think it is an important contribution to the dialogue. As you know, the National Academy of Sciences is doing a study on long trains. FRA has also a study that has been ongoing that focuses on the break aspects of long trains.

So, we are going to continue to make sure that research goes forward in a comprehensive way and that we seek comment from the workers that operate these trains so that we know that the research addresses their real-life experiences.

Mr. PAYNE. Thank you.

Mr. GARCÍA OF ILLINOIS. Thank you, Mr. Chairman.

Mr. PAYNE. Next, we will hear from the gentleman from California, Mr. LaMalfa.

Mr. LAMALFA. Thanks, Mr. Chairman.

I know the conversation will continue on the issue with railroad track time and the labor issues with that. When I have talked with folks on either end of the industry, whether on the train side or the receiving end of those products, it is a giant problem, so, I appreciate you being here today and addressing that.

One of the issues that we are looking at is that—well, first, let me back up a little bit. Not long ago, the Biden administration announced a trucking action plan to help the industry increase the number of truckdrivers we have on the road, which is even more critical with some of the train issues we have. So, it is especially for the long-haul routes, but we have not seen, that I know of, an action yet taken by the administration to replace or improve the employment barriers for the railroad side of it. So, as we are talking about maybe an improvement in the trucking area, we need to have that dramatically increased and improved in railroad employment.

So, the Secretary of Transportation has called for railroads to improve their service levels. Railroads have stated on multiple occasions they are having difficulty recruiting and retaining, et cetera.

So, with the issues we are having with the supply chain, and whether it is imports or domestic production, we have a lot of ability in this country to make up for imports. And we shouldn't be so dependent on imports anyway, in my view, for food production and fertilizer, as we know, because, obviously, for food production, you need fertilizer to get the yields we are accustomed to, so we can make up for it with the capacity we have in this country.

As you know, urea is going to be a bigger problem since major exporters, Russia and China and Qatar, they are cutting it off. And so, what is important about urea? Not only does it have the nitrogen source for fertilizer and growing food, but what is known as diesel exhaust fluid to keep the newer engines from post-2010 running cleaner. It is an additive that basically is fed into the exhaust system downstream of the engine that, if you don't have it on trucks, tractors, other equipment that are programmed for it, it won't run. Not only would it not run well, the computer system basically shuts it down. You can't operate the vehicle, the tractor, whatever, without the diesel exhaust fluid, the blue fluid, as you know.

So, there is becoming a big supply chain problem on that. And what can the administration do to be helping with the production of that as well as the transportation? Because my understanding is the railroad folks are, without the labor to move the product, are starting to cut back some of the truckstop people that would be vending it. They just don't have the capacity to move it. This is going to be a giant crisis here—yet another one—really soon if trucks and other equipment that is needed does not have this DEF, the DEF product to keep those newer cleaner engines operating.

Now, we can do other things. We can pull old trucks out of inventory that don't require that or maybe go back to older tractors or try to get a waiver on bypassing the system. That is not going to be popular with EPA or anybody. So, what should we do about this? DEF is going to be a big problem, and if the rails can't move it, what are we going to do about that?

Mr. BOSE. Congressman, that is something that I am happy to look into more and address it.

In terms of working with the industry, we are happy to do that and continue doing that to find ways to move the goods and the commodities that we need.

I just want to mention and address what you talked about workforce and increasing the railroad workforce in the CRISI grants that I mentioned in my opening statement. There was a grant that we gave for workforce development efforts. It was for Amtrak mechanical employees specifically. But, again, the funding that we have available now is going to unlock some possibilities, and workforce improvement—we are increasing workforce opportunities. We are going to look for——

Mr. LAMALFA [interrupting]. Well, Amtrak doesn't move the ball on what I am talking about here, and I need you to grasp the urgency of what I am talking about here. Because if we don't have this fluid, this DEF getting to where it needs to be, the trucks don't run, right. And "if you have got it, a truck brought it" is one of the common phrases, is that goods, food, whatever is not going to get moved from production to the shelf or even pre-production, from the fields to the mill, whatever it is.

Mr. PAYNE. Five seconds.

Mr. LAMALFA. This is a critical situation. So, we need not be just looking into it. We need urgency from the administration to look at an immediate way to make this happen. Thank you.

Mr. PAYNE. Thank you. The gentleman's time has expired.

We will next hear from the gentlelady from California, Mrs. Napolitano, for 5 minutes.

Mrs. NAPOLITANO. Thank you, Mr. Chair.

Mr. Administrator, it is good to see you again. I know you are familiar with my community of San Gabriel Valley of California, which has 160 trains daily [inaudible] in communities next to businesses and along school property. There are many grade crossings that cause major safety congestion and pollution concerns in my district. How is the infrastructure law improving grade crossing safety and installing grade separations?

And, secondly, I have significant concerns over the train length and the impact it has on safety in local communities. I have waited over 20 minutes for a train, over 100–200 railcars passing my com-

munity. What is the FRA doing to address the increased length of trains?

Mr. BOSE. Congresswoman, thanks for those questions. First off, when you are talking about grade crossings and improving or eliminating those, I have had the opportunity to visit both the Ports of Los Angeles and Long Beach. We also pulled together a series of communities and local governments in that area to talk to them about the opportunities in the Bipartisan Infrastructure Law and really pointing them to programs like CREATE where they can come together. And I know you are familiar with the Alameda Corridor and all the improvements there——

Mrs. NAPOLITANO [interrupting]. It runs right through my district.

Mr. BOSE. Yes, ma'am. And so, that is the kind of effort that we want to make sure the communities are aware of.

When you talk about long trains, it is definitely something that the FRA is looking into. As I mentioned earlier, that just collecting the data on that is something that FRA has started to do to make sure that we know what is going on in the system overall. We talked about in-train forces and the effects that long trains have on that. We also need to make sure the workers operating those trains are trained in the proper way possible. And also, there can be communication breakdowns that happen on long trains.

So, the points that you made are very good ones, and we are happy to follow up with your office more directly.

Mrs. NAPOLITANO. Well, I would like to follow up with you and make sure that maybe, if you have a chance to visit my district, you can see what impacts it has on the people and on the business in the area.

But I certainly am very pleased that you are there to take care of some of the issues that we talked about. And maybe we can—one more question that was just brought to mind is Operation Lifesaver. I know it is a volunteer group out of the railroad. But how can we help make it a committee or a group that really focuses on safety, that is not volunteer, that is set up by you and the railroads? Because it is essential when you have grade crossings that are near schools and there are kids involved.

Mr. BOSE. Congresswoman, Operation Lifesaver is very much a part of FRA's efforts. Just last week, they attended a conference about level boarding and grade crossing issues. So, they are a very big partner to FRA. We fund them based on the money that Congress provides on a recurring basis year after year, and we definitely look for any opportunities to continue to partner with them. They just had their 50th anniversary, and we are happy to celebrate it with them. But we are looking for ways to enhance their views on that.

And I will pass it over to Mr. Chapman.

Mr. CHAPMAN. And, Congresswoman, I will add that we at NTSB have a very good relationship with Operation Lifesaver. I work with them myself personally because of my own personal interest in grade crossing safety. They do outstanding work and, obviously, want to see additional support for them in any way possible.

Mrs. NAPOLITANO. Well, I would like to be sure that we have our schools available to tap into those sources, because it is quite a

problem with Alameda Corridor-East that doesn't have all the grade crossings that are necessary to prevent any accidents or anything happening in the area.

Thank you very much, Mr. Chair, and I yield back.

Mr. PAYNE. The gentlelady yields back.

We will now hear from Mr. Balderson for 5 minutes.

Mr. BALDERSON. Thank you, Mr. Chairman. And thank you both for being here today.

My first question is for Administrator Bose. About a month ago, FRA announced the establishment of the Corridor Identification and Development Program. According to the FRA, the program will facilitate the development of intercity passenger rail corridors. However, the FRA will not require that any proposals demonstrate the commitment of host freight railroads.

Does FRA believe freight railroad consolidation and participation is necessary in this program?

Mr. BOSE. Congressman, on shared corridors, especially those owned by host railroads, projects will not go forward without the host railroads' cooperation and participation.

Mr. BALDERSON. Thank you. Can you expand a little bit more on the role of the freight railroads in this program, please?

Mr. BOSE. In the Corridor Identification and Development Program? Well, I will start from the beginning. Right after the Bipartisan Infrastructure Law passed, we did several webinars. We reached out to the Class I railroads directly to ask them for comments as a part of the program so that the program would be informed by their views and would be stronger based on their views. So, we sought their input in the first place.

Then when we developed the program, we knew that going forward, again, that host railroads were absolutely necessary in participating. And we emphasize that in the technical assistance that we provide to any community, any State, any locality that is looking at doing the corridor program.

Mr. BALDERSON. OK. Thank you very much.

My next question, Administrator, is: In the FRA's guidance for the Corridor Identification and Development Program, the FRA is requiring applicants state whether they intend to select Amtrak as its operator or not. Can you explain why FRA is requiring this determination so early in the process?

Mr. BOSE. Congressman, I am not—can you repeat that? I didn't catch that.

Mr. BALDERSON. Yes, sir. I sure can. I apologize.

In the FRA's guidance for the Corridor Identification and Development Program, the FRA is requiring applicants state whether they intend to select Amtrak as its operator or not. Can you explain why the FRA is requiring this determination so early in the process?

Mr. BOSE. Thanks for the question, Congressman. We are just seeking that for informational purposes. It in a way helps determine how far along the corridor development is. Whether it is Amtrak or a private operator or a non-Amtrak operator, it is just a question asking if that box has been checked off.

Mr. BALDERSON. OK. I am going to follow up. To be clear, would the FRA encourage and protect competitive bidding for other rail operators in this program?

Mr. BOSE. Congressman, absolutely. And let me be clear on that. We have a private operator in Florida. We have a private operator developing a railroad in California, Nevada, in Texas. And we encourage other private operators throughout the country to look at passenger rail opportunities in the United States.

Mr. BALDERSON. Thank you very much. I appreciate your answers.

And, Mr. Chairman, I yield back.

Mr. PAYNE. The gentleman yields back.

We will now hear from Mr. Johnson from Georgia for 5 minutes.

Mr. JOHNSON OF GEORGIA. Thank you, Mr. Chairman, for holding this hearing. And I want to thank the witnesses for your time and your testimony.

And I apologize for the bad lighting. I am in a bad situation, trying to do the best I can.

But the U.S. has the largest rail network in the world, and keeping such an extensive system running safely is a heavy lift. Many issues continue to plague railroads today, and they are due, in part, to cost cuts and barebones operational plans implemented across freight railroads. And these cost-cutting measures are celebrated and encouraged by Wall Street. Meanwhile, Americans face job losses, poor rail service, and potentially deadly situations for railroad employees. Safety and quality of service should always be the priority, not profit.

In 2021, Class I railroads had more than 1,200 train accidents and 9 employees died. In 1 month alone, two conductors with less than a year of service were struck by moving equipment and suffered serious injuries. Despite that, conductor certification training has been shortened by the railroads when onboarding new conductors.

Mr. Bose, does the FRA have concerns about the quality of certification trainings, given that the reduced certification period risks worker safety?

Mr. BOSE. Congressman, that is something that FRA looks at every day, and we know the concerns that have been expressed. And we have actually caught some situations where the training and certification process needs to be improved, and we have shared that with the railroads directly so that the system can be safe.

Mr. JOHNSON OF GEORGIA. Are there any other plans that FRA has to address that concern?

Mr. BOSE. Yes, sir. The Bipartisan Infrastructure Law actually asks FRA to look at the certification program, and we have that underway. And, again, we are looking at those training programs railroad by railroad. And anytime we identify gaps or deficiencies or areas where improvements are needed, we make sure that the railroad makes those right away. We want to make sure that when railroad workers operate on the trains or provide service, that they are well trained and well versed. These are special skills that are required to be railroaders.

Mr. JOHNSON OF GEORGIA. Thank you.

Mr. Chapman, in your testimony, you detail a number of accidents, including some with fatalities, that occurred despite use of the train approach warning, or TAW method, used by crewmembers.

Mr. Chapman, can you briefly describe the TAW method for us and some circumstances where it would and would not be appropriate?

Mr. CHAPMAN. Congressman, it is actually a very simple system. It relies upon a watchman or a lookout to spot oncoming trains and then to warn the crew, the working crew, of the oncoming train. And the requirement is to allow the crew to clear within 15 seconds before the oncoming train.

The problem is that it is highly susceptible to human error, frankly, distraction, failure to properly anticipate the oncoming train. Trains move very quickly. And so, we have seen some accidents that were quite tragic.

The one that I highlighted in my statement was the Amtrak accident in Bowie, Maryland, where a young man was killed, struck by an oncoming Amtrak train moving at 100 miles an hour. He was standing on an active track. Had no other place really where solid footing was available to him.

What we believe is that, in controlled track areas, we are not seeing the railroads take sufficient advantage of the capabilities of the PTC system, which allows speed limitations and other work limits to be put in place to ensure that we don't have to rely on such a relatively rudimentary system as train approach warning.

Mr. JOHNSON OF GEORGIA. Thank you.

My time has expired, and I yield back.

Mr. PAYNE. The gentleman yields back.

We will now hear from Mr. Johnson of South Dakota.

Mr. JOHNSON OF SOUTH DAKOTA. Thank you very much, Mr. Chairman.

I would like to have a conversation with Mr. Bose, particularly related to crew size. I know a few years ago FRA had noted that it lacked empirical evidence to suggest that one-person crews were either more safe or less safe than two-person crews.

Sir, does the FRA have any new data or different findings?

Mr. BOSE. Congressman, we will be happy to share that with you when the notice of proposed rulemaking comes out in the near future.

In terms of data, we know in the last NPRM, the notice of proposed rulemaking, in 2016, cited Casselton, North Dakota, as a place where an incident happened, where the crew worked together. And having a less than two-person crew in that situation could have been an even more negative outcome there.

You mention data. FRA also, subsequently to that withdrawal notice, has had research, and we have conducted even more research about crew size. So, we are happy to have that a part of the record when the notice of proposed rulemaking goes out.

Mr. JOHNSON OF SOUTH DAKOTA. Yes. And I do think—I mean, the North Dakota example is illuminating. Of course, it is just one example. It is an anecdote. We can learn from those things, but I do think we want to make decisions. We want to promulgate rules

based on good data. Are you not in the position to be able to release that data to the public prior to a rulemaking?

Mr. BOSE. Congressman, it has to be a part of the rulemaking because, right now, we are in a deliberative process putting that together. But we are happy to walk through the NPRM, when that comes out, with you, with your staff, with the committee. I know there will be a lot of interest.

Mr. JOHNSON OF SOUTH DAKOTA. Well, and to be clear, sir, I am not asking that you would share with me what you intend to introduce as a proposed rule. I understand that that would be protected by the deliberative process. But, certainly, safety data is something that you could release in advance of an NPRM, isn't it?

Mr. BOSE. It depends on what type of safety data you are talking about, Congressman. We definitely have readily available data on an ongoing basis that we put up on our website. But we are happy to—I will follow up with your office and go over some specific data that we can share.

Mr. JOHNSON OF SOUTH DAKOTA. Yes. I think that would be instructive. Of course, whatever we do, we want to be evidence-based and data-driven.

Do you have a timeline in mind for next steps with regard to the NPRM?

Mr. BOSE. The NPRM is under review right now, and it is hard to pinpoint an exact time on that.

Mr. JOHNSON OF SOUTH DAKOTA. So, we don't know whether that would be weeks or months or longer?

Mr. BOSE. It is going to depend, Congressman, on the review process. I wish I could be more specific. I am sorry I can't be.

Mr. CHAPMAN. Congressman, if I could add something from the NTSB perspective.

Mr. JOHNSON OF SOUTH DAKOTA. Yes.

Mr. CHAPMAN. We think the very basic step that is being taken now in modifying the incident/accident report form, FRA's incident/accident report form, will help ensure just better gathering of data with respect to crew size and train length. We think that that very basic step will help generate considerably more useful data than what we currently have.

Mr. JOHNSON OF SOUTH DAKOTA. Sure. Well, and I would just note, Mr. Bose, I understand timelines can be flexible. And I am not—I mean, I am not trying to pin you down. But I was a regulator in a former life. I certainly as an agency had a role in promulgating rules, and I always felt like one of the ways that I could help to increase trust and transparency and confidence is giving people some sense of when things might happen.

And just even internally, of course, with my team, when I was a former regulator, I would say, hey, gang, we want our review to be done on X date. We will build in a couple of extra weeks of wiggle time, because we know other things come up.

But the idea that you just don't have any idea when the world would get a sense of what you are planning to propose, I don't know that that is confidence inspiring. And I know you work in an incredibly difficult political and technical environment. But I just—I would just note that I think giving rough timelines can help to

buy up and build confidence in the work of the FRA. And I hope you keep that in mind as we move in the future.

With that, Mr. Chairman, thank you. And I yield back.

Mr. PAYNE. The gentleman yields back.

We will now hear from Mr. Auchincloss for 5 minutes.

[No response.]

Mr. PAYNE. OK. Next, we will move to Mr. Carter from Louisiana for 5 minutes.

Mr. CARTER OF LOUISIANA. Mr. Chairman, thank you very much.

My question is for Administrator Bose. Thank you for being here. I represent the Second Congressional District in Louisiana, which is home to a lot of quaint towns. One particularly quaint town is the city of Gretna that has a train that runs through that community. There has been talk of expanding that train, and I will tell you that the devastation of trains that go through small communities is real. It impacts commerce, it impacts quality of life, and generally has been proven to be a real problem.

Can you share with me your views on how we can work to preserve the security and sanctity of our small towns to prevent these expansions of railways that run through small cities?

Mr. BOSE. Congressman, for FRA, safety is absolutely our priority, so, we want to make sure any trains that operate in those communities are doing so in a safe manner.

In terms of the expansion, I don't have the details that you do exactly where and to what level. I can tell you that when it comes to the railroads increasing their business and increasing their footprint in a community, there are opportunities through funding, through mitigation activities that we always encourage, not to mention community input and community collaboration as a part of the process.

For the Federal Railroad Administration, we want to make sure our field inspectors are there for the community to answer any questions that your constituents may have.

Mr. CARTER OF LOUISIANA. And we have been in communication, and I thank you for that. And I know that working with the Governor's office and Secretary Wilson with the Department of Transportation and Development in Louisiana, there has been discussion ongoing.

I just want to flag that for you and ask that maybe we can have a further discussion offline on the specifics of the issue in the city of Gretna in Louisiana. But more generally across the board, this is an issue that plagues many communities. And while we understand the importance of commerce, we want to make sure it is done in a way that, as you mentioned, is safe, secure, and does not disassemble, if you will, the economy and community that is so important to all of us.

Pivoting from that, the workforce shortages, how has that increased your ability to maintain the security of rails that run through communities?

Mr. BOSE. Congressman, in terms of the staff reductions and the workforce that you just mentioned, we in FRA absolutely believe that the rail system in general is safe in its operations. There is always room for improvement. We can always do better. And we want to make sure that when the workforce increases, that the

training, the certification processes are done the right way, and that we want to make sure that the infrastructure and the equipment and every other part of the railroad is as safe as possible for workers.

Mr. CARTER OF LOUISIANA. And has that been the case, have you seen increase, decrease, standstill as a result?

Mr. BOSE. Congressman, I will just tell you, when I came on last year, I had seen, the first half of the year especially, there were fatalities of workers. And I followed those closely. Every day there are reports I get about injuries and the quality of the workplace. We want to make sure that there is a safe environment for workers.

So, after that, I sent a letter. I contacted the railroads directly, making sure that training and awareness of the workers is paramount in their minds. So, we continue to do that on a daily basis, Congressman. Whether it is through inspections, through audits, through other means. FRA does that as a part of our daily work every day.

Mr. CARTER OF LOUISIANA. And while I applaud you for the safety of workers—that is critically important, and I stand wholeheartedly in support of that—tell me about the security of neighborhoods and people and pedestrians.

Mr. BOSE. Yes. Absolutely, Congressman. Another aspect of what this administration is focused on is equity. Right? And we want to make sure that when it comes to grade crossing safety, trespasser safety, the impact that a railroad has on a community is a safe one. We have recently done a grade crossing summit to highlight safety improvements that we can make. So, we will continue to do that. Anytime you need us to engage with your communities directly, I am happy to do that. Thank you.

Mr. PAYNE. Thank you.

Mr. CARTER OF LOUISIANA. I will definitely take you up on that.

My time has expired. I yield back.

Mr. PAYNE. The gentleman yields back.

We will next have Mrs. Steel from California for 5 minutes.

Mrs. STEEL. Thank you very much, Mr. Chair, and thank you very much, Ranking Member.

And, Administrator Bose, earlier this year organized crime groups wreaked havoc on cargo trains in Los Angeles County, stealing packages, equipment, and other important products from railroad cars. This instance shed light on data collected from Union Pacific since December 2020, detailing the 160-percent increase in thefts along railroad tracks in Los Angeles County. Many of the products stolen included medical equipment, electronics, and food products, some of which may currently be out of stock due to supply chain shortages.

It is also important to note that many of these purchases are delivered, not just in California, but throughout the United States, affecting interstate and international commerce.

The safety of our freight rail system includes the safety of our rail workforce and the security of rail freight. How are you working with the Department of Justice to hold the perpetrators accountable, and how are you ensuring that this instance does not spur up again this holiday season?

Mr. BOSE. Congresswoman, thank you for that question. I think you are referring specifically to what happened on Union Pacific in the L.A. area over the course of the last year.

We have talked about workforce shortages. That is not only in terms of the operations of the trains, but it is also in their law enforcement. Those rights-of-way are privately owned. These are privately owned railcars. They have their own police force that is to look out for vandals, for other security issues.

We made it clear to Union Pacific, as well as other railroads, that security and securement of their equipment is very, very important. In the L.A. area, we worked with local law enforcement, as well as the Governor's office and Department of Homeland Security, FBI, to make sure that those instances are not repeated and we can improve on those. If they reoccur, we are ready to tackle those with our other agencies and law enforcement. They are very much a part of that.

I am hopeful that Union Pacific is giving the attention the issue deserves so that those incidents that happened over the course of the last year aren't repeated.

Mrs. STEEL. So, since Federal and State and local law enforcement are working together, have these crimes gone down or stayed the same or increased?

Mr. BOSE. Congresswoman, I have not seen an increase in those activities. If you have information to the contrary, please, please feel free to share it.

Another aspect of this that was really, really important is just securing the actual intermodal units that the trains were carrying and make sure they are properly locked. So, I am glad those precautions have been taken going forward.

Mrs. STEEL. Thank you very much, Administrator Bose.

Mr. Chairman, I have another question, but I don't think I have enough time to get answers. So, what I am going to do is I am going to submit in writing regarding that Federal funding and grants have been provided to California high-speed rail, which has already failed. So, I am going to put this in writing.

And I yield back. Thank you, Mr. Chairman.

Mr. BOSE. That will be fine. Thank you, Congresswoman.

Mr. PAYNE. We thank the gentlelady for her consideration.

And we will next have Ms. Titus from Nevada.

Ms. TITUS. Thank you very much, Mr. Chairman.

I would just like to ask Mr. Bose about the rule that was released yesterday by the FRA on Fatigue Risk Management Programs. In the final rule, there was a reference to the FRA revising its accident and incident investigation procedures to analyze information on the involved railroad's attendance policies.

I wonder if you could expand more on this and the reasons you all changed your procedure. And if in the future FRA shows that there are attendance policies that contribute to rail incidents or accidents, would the FRA consider readdressing the issue?

Mr. BOSE. Congresswoman, thanks for that question. The fatigue rule, as you mentioned, in addition to that, we are also, when it comes to accident investigations, asking questions about hours of service, about fatigue. We also did a survey where we got over

10,000 responses from conductors and engineers, and we are analyzing that as well.

In terms of rest, that is a very, very important issue, and attendance policies are a part of that. It is something that FRA has been reviewing and did review across the board at the railroad companies.

We were not able to find a regulatory tool that we have available to address those directly. But, again, we are very focused to make sure that workers are meeting the hours-of-service requirements that are in law. We are making sure that FRA is analyzing data information related to hours of service and fatigue.

I contacted the railroad companies to make sure that they knew that the quality of rest and the quality in the attendance policies is very important, that resting away from home is not the same as resting at home. And I made that clear to them.

In terms of the fatigue rule, Congresswoman, the consultation with workers is so important and such an important aspect of that. We had the Fatigue Risk Reduction Program and the System Safety Program come out in the last administration. There was a hole in both those regulations that dealt with consultation with workers. We knew that that could be improved on, and through the fatigue rule, we started addressing that. We need to do even more to ensure that that consultation is done, because that will lead to a better fatigue plan and better safety outcome.

Ms. TITUS. You said you don't have the regulatory tools to do something. Are there measures that we could take here in this committee to give you those regulatory tools? Would you go back over that and see if there is anything we need to do or we need to bring forward?

Mr. BOSE. Congresswoman, what I was referring to specifically was the attendance policies and hours, and those are things that are often worked out through agreements between workers and the railroad companies. That is what I was referring to.

What FRA does is we look at hours of service, we look at fatigue, and we make sure that we have the information that we need. And if there is anything we need to address, we do that directly.

Ms. TITUS. Well, it seems that in recent years railroads have been acting more like Wall Street, cutting workers, longer trains, less concern about people who actually roll the trains. And I just want to be sure that they are protected and they have as much rest as they need, because if they don't, not only does that put them at risk, but it puts whatever they are hauling at risk, and it puts everybody in the neighborhood that they go through at risk.

Mr. BOSE. Congresswoman, absolutely. We know what has been going on in the industry. I can tell you that FRA is doing focused inspections, is doing audits. Those were things that in the recent past FRA had not put a lot of effort into. I reinvigorated those efforts. And we want to make sure that the railroads know that we are looking at these issues very, very closely in line with what has gone on in the recent past. We don't want to be late to this. That is why we are actively looking at these things right now and addressing them.

Ms. TITUS. Well, thank you, Mr. Bose. I am glad to hear that.

Thank you, Mr. Chairman. I yield back.

Mr. PAYNE. The gentlelady yields back.

We will now hear from Mr. Perry from Pennsylvania.

Mr. PERRY. Thank you, Mr. Chairman. Thank you, gentlemen, for being here.

Administrator Bose, I want to read from your testimony: "The mission of the Federal Railroad Administration is to enable the safe,"—and I am just going to underline that—"reliable, and efficient movement of people and goods for a strong America, now and in the future."

That is a quote.

And then another one: "Safety—including the safety of railroad employees, rail passengers, and the communities through which railroads operate—is FRA's top priority."

Sound about right to you? I mean, sounds like something you would say and sounds like the mission that you are on, I would think.

Mr. BOSE. Yes, sir.

Mr. PERRY. OK. So, I know that when you talked to Mr. Crawford, you didn't want to answer questions regarding a lawsuit with BNSF. But I am going to ask you questions about Norfolk Southern, so, hopefully you can answer some questions regarding automated track inspections.

Are automated track inspections and manual inspections mutually exclusive? If you do one, you can't do the other?

Mr. BOSE. Congressman, the answer to that is no.

Mr. PERRY. Of course not, right? So, you can do both. According to the testimony from Norfolk Southern, which conclusively showed that expanding the waiver would improve safety, would improve safety, and that also said that when the request was denied, it described the program as successful. But it seems like the key finding was ignored that the systemwide implementation of ATGMS would improve rail and worker safety.

Have you provided any rationale why the waiver was denied?

Mr. BOSE. We did, in the letter denying it.

Mr. PERRY. Can you impart that to us now?

Mr. BOSE. I am sorry?

Mr. PERRY. I mean, can you just generalize and tell us why it was denied?

Mr. BOSE. Well, the letter said that the Railroad Safety Advisory Committee is looking at automated track inspections in general, and that is the way that the FRA is addressing automated track inspections.

Mr. PERRY. So, you don't think they have been successful?

Mr. BOSE. Congressman, I am not going to get into—that is—there is a petition for reconsideration. I want to be respectful——

Mr. PERRY [interrupting]. I am just asking you. I know there is a petition, but we are trying to figure out if this technology works and if it is not mutually exclusive. So, Norfolk Southern, BNSF, any other railroad could implement the automated track inspection and also do manual inspections, but they are not allowed to do automated track inspection right now because it has been denied. Right? The waiver has been denied.

So, I would like to know why that is, if you don't think, if the FRA doesn't think that they have been successful or that they enhance or increase safety, because that is what it seems like.

Mr. BOSE. Congressman, I think this is a really important point. Norfolk Southern could use automated track inspections right now. In fact, I think they are using it right now——

Mr. PERRY [interrupting]. But they can't expand it.

Mr. BOSE [continuing]. Without a waiver.

Mr. PERRY. But they can't expand it, right?

Mr. BOSE. They can expand it to other territories throughout their network.

Mr. PERRY. So, they haven't been denied a waiver?

Mr. BOSE. Congressman, in order to use automated track inspections, they do not need a waiver in the first place.

Mr. PERRY. Well, it seems like—and I said I wasn't going to ask, but I am going ask. It seems like on the same day that they were denied, BNSF was denied to expand its preexisting waiver to new territories. Is that not correct?

Mr. BOSE. Both were denied by the Railroad Safety Board at the FRA, yes, sir.

Mr. PERRY. I thought you just said they weren't denied, they could expand wherever they wanted to.

Mr. BOSE. Automated track inspections do not require a waiver to be in use. They are in use across railroads right now.

Mr. PERRY. So, why deny or not deny?

Mr. BOSE. Congressman, factually, they were seeking those waivers to eliminate or reduce visual inspections.

Mr. PERRY. And how do you know that?

Mr. BOSE. How do I know that?

Mr. PERRY. Yes.

Mr. BOSE. Because the docket that they submitted, the request that they submitted is something that is available to read.

Mr. PERRY. OK. And it says that they did it because of that.

Mr. BOSE. Among other reasons, yes.

Mr. PERRY. OK. So, they were going to reduce them. But were they going to stop them, visual inspections, reduce or stop?

Mr. BOSE. I don't recall exactly what they said, but——

Mr. PERRY [interrupting]. And it is not mutually exclusive. So, they can do automated track inspection and visual inspections, right?

Mr. BOSE. Congressman, I am not going to get into it because, again, there is a petition for reconsideration. There is litigation going on. I have tried to answer your questions.

Mr. PERRY. Thank you, Mr. Chairman. I yield.

Mr. PAYNE. Thank you.

And I think it was clear everyone in the room supports ATI and no waiver is required to operate ATI.

The next person up is the gentleman from Massachusetts, Mr. Auchincloss, for 5 minutes.

Mr. AUCHINCLOSS. Thank you, Chairman.

Before I begin, Administrator Bose, would you like to take a minute of my time to expound on your answers to my colleague?

Mr. PAYNE. We are getting some feedback here.

[Pause.]

Mr. PAYNE. The gentleman can proceed.

[No response.]

Mr. PAYNE. While we are trying to figure out what is going on with Mr. Auchincloss, we will hear from Mr. Burchett.

Mr. BURCHETT. Thank you, Mr. Chairman. I appreciate that.

I am the 435th most powerful Member of Congress, so, if these questions have been asked before, I apologize. Obviously, my party has not accepted my position in leadership as I have. So, I appreciate you all.

We all know that businesses are struggling to find workers. And I am wondering why would the agency consider forcing small businesses to hire folks that they really don't need?

And I guess that is to Administrator Bose.

Mr. BOSE. Congressman, I am not sure exactly what you are referring to in terms of forcing railroads to hire workers. I am not sure if you are talking about the shortages that we have heard from the railroads directly in terms of the supply chain and the increases that they need or if you are referring to the crew size.

Mr. BURCHETT. I am referring to the rule that President Biden's administration has moved forward to hire personnel or operators with more people on a train than a lot of folks feel is necessary.

Mr. BOSE. Yes, sir. So, when it comes to that, I will just note this: There was a notice of proposed rulemaking back in 2016, having to do with crew size. At that time, some railroad companies had one-person crews, and there was not going to be a change to that, if the railroads could provide the rationale for continuing that. And also, in terms of the crew size, right now, there is a minimum of two people on crews across the board at the railroad companies.

So, there was, in the last notice of proposed rulemaking, if it was below two, there was an opportunity to continue that, as well as, if there is two, to maintain it. And there was also a safety case that went along with those.

Mr. BURCHETT. OK. I am also worried, to carry that on, if the railroads can't meet some of these requirements, do you think it is possible that fewer trains would run and that would result in a worsening service and increased supply chain bottlenecks?

Mr. BOSE. Congressman, when it comes to operating the trains and providing the service, I leave that to the railroads to do on their own. They are very successful businesses and have been for a long time in this country, and I think they can figure that out pretty well.

But I just want to highlight, again, the Surface Transportation Board's April 27th hearing where we did hear from customers and communities that experienced a lack of service. If there is anything the FRA can do, the administration can do to increase the workforce for them, the railroads to increase their workers or retain workers, we are happy to work with them.

Mr. BURCHETT. OK. I just read that some of those mandates might carry over in more disruptions.

Two weeks ago, 24 short lines were awarded CRISI grants. And I am wondering, how else is the Federal Railroad Administration using the CRISI grants to invest in short line upgrades in some of those safety improvements?

Mr. BOSE. Yes, sir. So, when it comes to short lines, FRA has a pretty robust program, but CRISI is the primary way that we fund the short lines. We also have a Short Line Safety Institute where we make sure that there is training and aspects of safety that we are communicating with the short lines directly. FRA also engages with the short lines throughout the year so that we can talk to them about safety and provide resources that they need.

I had an opportunity to go to California in Oakdale, California, and visit a short line company called Sierra Northern. And they were replacing ties, believe it or not, that were over 100 years old, with the CRISI money that we gave them. So, we are always looking for more opportunities. We know——

Mr. BURCHETT [interrupting]. I hope it wasn't those concrete ones. I see those behind some property I used to have. I see those. They make nice borders for gardens now. They didn't last too well as the good old wooden ones, I am afraid.

Mr. BOSE. Yes, sir. They are wood. They are wood.

Mr. BURCHETT. Yes, sir. All righty. I am about to run out of time. But I am curious about the administration's support of funding CRISI at a higher level than its fiscal year 2023 budget. Fiscal year 2023, the Biden administration requested $1.5 billion for the grants, and it was less than $1.6 billion appropriated by Congress in fiscal year 2022.

And I am out of time, if you can just give me a quick one on that.

Mr. BOSE. Yes. We are always open to more funding for CRISI. The Bipartisan Infrastructure Law has funding for CRISI for 5 continuous years, and that is a big deal to know that there is going to be a robust program.

Mr. BURCHETT. OK. Thank you, Mr. Chairman. I yield back none of my time.

Mr. PAYNE. The gentleman yields back.

Now we will have Mr. Stauber from Minnesota for 5 minutes.

Mr. STAUBER. Thank you very much, Mr. Chair.

My question will be a followup to Representative Burchett's. In my home district in northeast Minnesota, we have Class I railroads and short lines crisscrossing the entire State. They carry the iron ore that makes 80-plus percent of America's steel. They carry coal and other commodities and more from the west coast and the Plains, through the Port of Duluth.

They employ hundreds of people and provide for families, supporting union jobs. Rail safety is ever present both in those communities that have rail lines running through them and the families who have parents and loved ones working on these lines.

One such program that is important to rail safety is the Consolidated Rail Infrastructure and Safety Improvements grant program, which you just talked about. Short line railroads are directly eligible for CRISI funds, and they have been successful in harnessing these resources since the program was created in 2015.

And 2 weeks ago, the FRA made its latest awards, announcing 24 short lines would benefit from this program, putting investments to work to make their railroads safer by upgrading outdated track, bridges, and tunnels. These investments also make the network more efficient.

Can you discuss your continued commitment toward using the CRISI program to invest in key safety goals, like allowing short line freight rail to upgrade and make important repairs?

Mr. BOSE. Congressman, short lines play such an important role in the railroad network that we have, and we want to do everything possible to make sure that they are robust and have the funding to make the improvements that they need. As you mentioned, the CRISI program is such a great tool to do that.

Mr. STAUBER. Thank you very much.

And can you discuss how CRISI more generally helps railroads improve the efficiency of the supply chain?

Mr. BOSE. Yes, absolutely. So, let me point out a couple of examples. A lot of bridges don't carry 287 pounds of capacity. So, the program can be used to make those improvements. They are used to make improvements to track so that the tracks can accommodate higher speed trains. And also, in terms of other infrastructure improvements, to improve grade crossings or eliminate grade crossings, that is another way that the CRISI program is used by short line railroads.

Mr. STAUBER. Thank you very much.

And I will just end with this. I would just encourage you and the agency to continue working with railroads that are doing improvements across our great land, to make sure that the local community and the elected leaders in those areas where the improvements are going to be made are part of the conversation. And I think that is critically important.

We know that the railroads help build our country, and we are upgrading the infrastructure. But I just want to make it clear to you, my recommendation is to make sure that our communities, many of them are smaller communities, that when there are upgrades, et cetera, that the administration supports working with the community, the community leaders and such, and have an actual input on the design and be involved in the conversation. I think that would be a great help as the railroad continues to invest.

Mr. BOSE. Absolutely, Congressman.

Mr. STAUBER. Thank you very much.

Mr. Chairman, I yield back my 1 minute and 5 seconds.

Mr. PAYNE. I appreciate the gentleman's consideration.

And now we will have Mr. Auchincloss from Massachusetts who has joined us.

Mr. AUCHINCLOSS. Chairman, apologies for the audio issues. Thanks for your patience.

Before I begin, Administrator Bose, if you would like, I want to grant you a minute just to further expound on your answers to my colleague, Mr. Perry. I know you didn't have a whole lot of time to explain. But if it would be helpful to you, I want to give you that time now.

Mr. BOSE. Thanks, Congressman. I was just trying to express that automated track inspection efforts don't require any sort of approval, any affirmative waivers for them to continue and be utilized on a regular basis. Railroads can use them, are using them right now without waivers.

Mr. AUCHINCLOSS. Got it. And now, Administrator, I want to talk to you about CRISI. Short line freight rail is critical to countless communities and economic sectors, helping industrial manufacturing and agricultural customers move their goods to market. The short line freight rail industry estimates that more than $12 billion in investments are needed to ensure that the industry can modernize and meet the needs of our economy.

The recently passed infrastructure law dramatically increases the level of resources available through the Consolidated Rail Infrastructure and Safety Improvements grant program, the CRISI program.

Massachusetts, the State I represent, has received nearly $35 million in CRISI awards in recent years and another $1.75 million 2 weeks ago, putting the investments of the infrastructure bill to work to make their railroads safer by upgrading outdated tracks, bridges, and tunnels. And these investments are also making the network more efficient.

Can you discuss your commitment towards using the CRISI program to invest in key safety goals like allowing short line freight rail to upgrade and make important repairs?

Mr. BOSE. Congressman, you have that commitment.

Mr. AUCHINCLOSS. How can short line rail also support local infrastructure improvements, many of which will use older rails to transport construction materials?

Mr. BOSE. We can definitely look for projects where we can make those improvements. And we know, especially when it comes to short lines, often they don't have the resources to do the long-term improvements that are necessary. And we want to make sure the program is utilized for that purpose.

Mr. AUCHINCLOSS. And can you also discuss how CRISI helps short line railroads improve the efficiency of the supply chain?

Mr. BOSE. Yes, absolutely. I was mentioning, often in some cases, short line railroad bridges aren't able to carry 287 pounds of equipment. So, that is one area. Also, often they need track upgrades or replace ties, and the CRISI program enables, just as examples, to make those improvements. So, short lines definitely utilize that program.

And I also know that the short lines, relatively small grants make a huge difference to those short lines, because they encompass smaller geographic areas. So, we actually have a bigger impact even with the short lines. The funding goes a lot further.

Mr. AUCHINCLOSS. Got it.

Mr. Chapman, final question for you, a basic but open-ended one. What is the single most important thing we can do to improve the safety of freight rail?

Mr. CHAPMAN. Well, the emphasis that I expressed in my opening statement with respect to train approach warning, I think if we took greater advantage of the limitations available through PTC, made less use of train approach warning, I think that would have the greatest impact, from our perspective, certainly with respect to safety of roadway workers.

Mr. AUCHINCLOSS. Mr. Chair, I yield back.

Mr. PAYNE. Thank you. The gentleman yields back.

Now, we will have Mr. Westerman from Arkansas for 5 minutes.

Mr. WESTERMAN. Thank you, Mr. Chairman. Thank you to the witnesses.

My first question I want to ask Administrator Bose. And I hear that the administration is moving forward with a new rule that could require railroads to hire more personnel or to operate with more people on a train. It would be the first time in nearly the 200-year history of railroading in this country that there has been a Federal rule on the number of people needed to operate a train. And if it goes forward, I am worried about the effects on small businesses and specifically short line railroads.

I have the great opportunity to represent more short line railroads in my district than any other congressional district. And instead of putting capital where it may be better used, like making improvements to track and structures that are critical for the safe and efficient movement of goods and freight, I am concerned that they will be asked to spend more money on unnecessary workforce expansion.

Doesn't it make better sense to let small business railroads invest in their infrastructure, which allows for a safer, more efficient rail network, instead of being forced to put more people on the payroll?

Mr. BOSE. Congressman, thank you for that question. As you know, and I have stated before, we are working on the notice of proposed rulemaking for the crew size.

What I also said earlier, and I will highlight a part of it, is that, in 2016, there was a notice of proposed rulemaking, and there were some short line railroads identified within that that had less than two-person crews: one-person crews. And there was a path for them to continue utilizing one-person crews if they could make the safety case for doing that. So, that was in the last notice of proposed rulemaking.

Any rule that we put forward has to have a small business consideration built into it. So, there will be absolutely an opportunity for comments for us to receive to hear from the short lines and other stakeholders directly when we go forward with that.

Also, as you know, there is also a cost-benefit analysis that will have to be a part of that notice of proposed rulemaking.

Mr. WESTERMAN. Thank you. In fiscal year 2022, Congress provided CRISI with $1.625 billion in a mix of discretionary and mandatory spending. But in the fiscal year 2023 budget request, the administration proposed $1.5 billion.

Is there a reason that the administration is proposing to cut CRISI funding? I mean, I am all for cutting costs where necessary, but I am hoping you can tell me why they chose that program to cut and what would be cut.

Mr. BOSE. Congressman, there are a lot of considerations that go into the budget proposal that we put forward. The request reflects those tradeoffs. But we know, and I will restate this, the CRISI program has a lot of benefits. It has given a lot of benefits to short line railroads, and I look forward to working with Congress to make sure that that program continues in a robust way.

Mr. WESTERMAN. Yes. With all the need for investment in our infrastructure and especially on short line freight rail, it seems like it would be wise to fully unleash that potential.

Mr. BOSE. Yes, sir. Yes, sir. I understand. And it is also important that we got the money out for fiscal year 2021 that you all provided, and we did that just a few weeks ago. So, it is absolutely—I hear your point on the importance of the program.

Mr. WESTERMAN. All right. Thank you, Administrator.

Mr. Chairman, I yield back.

Mr. PAYNE. Thank you.

I would like to thank the witnesses for their time today and their testimony. We find it very valuable, and we will continue these discussions into the future. Thank you.

We will now retire this panel and ask the second panel to come up.

[Pause.]

Mr. PAYNE. OK. Good afternoon. Next we will hear from panel 2.

Before I proceed, I ask unanimous consent to enter into the record a statement from the Association of State Railroad Safety Managers.

Without objection, so ordered.

[The information follows:]

Statement from the Association of State Railroad Safety Managers, Submitted for the Record by Hon. Donald M. Payne, Jr.

To: U.S. House Committee on Transportation and Infrastructure.

The Association of State Rail Safety Managers (ASRSM) would like to thank the U.S. House Committee on Transportation and Infrastructure for the opportunity to provide a written statement regarding current railroad industry practices that are having a negative impact on safety. The ASRSM is a Federal Railroad Administration supported state-based organization comprised of rail safety professionals from thirty-one member states. The purpose of this organization is to support, encourage, develop, and enhance railroad safety, especially through the Federal/State Railroad Safety Programs as established and defined by the Federal Railroad Safety Act of 1970. A principal motivation for forming this Association was to attain greater uniformity among states in the conduct of rail regulatory activities and to enable states to speak with a collective voice on important rail safety topics.

There are several railroad practices that are of particular concern to the Association. These concerns have been manifested primarily in the operations of various Class I railroads, although it is not uncommon to find them at the Class II, and Class III levels as well. The issue of blocked grade crossings, the operation of very long trains, the recent issue of railroads insisting that roadway owners/municipalities bear the cost of on-going maintenance of crossing devices, and the exuberant costs for preliminary engineering agreements are four key issues we believe are critical and need to be addressed. These concerns are further outlined below.

BLOCKED CROSSINGS

There are over 228,000 public and private highway-railroad grade crossing across America. Blocked highway-railroad crossings by standing and slow-moving trains are a chronic problem in almost every state. In recent years, railroad companies have significantly expanded the use of longer trains (sometimes exceeding three miles long) The cumulative impacts of blocked highway-railroad crossings are very serious and include:

- Significant delays in providing firefighting and lifesaving emergency medical care to those in need in areas with blocked access.
- Delays in police response to criminal activities with blocked access.
- Delays to school buses and parents transporting children to and from school.
- Attempts by drivers to "beat" the trains at crossings they know are routinely blocked—endangering the vehicle occupants and train crews.
- Trespassing by pedestrians (including schoolchildren) over and under stopped trains, risking serious injury or worse.

- Prolonged traffic delays, impeding commerce and causing re-routed traffic to impact local neighborhoods.
- Preventing citizens from accessing their own homes, schools, and workplaces, sometimes for hours at a time.

Many states and municipalities have implemented laws and rules that prescribe the period a train can block a crossing for reasons other than mechanical issues or emergencies. Unfortunately, courts have consistently upheld the railroad's arguments that state laws are federally preempted, rendering these local solutions moot. The new FRA blocked crossing portal has not shown much effectiveness at this point, other than to further illuminate these persisting issues suffered by so many communities.

CONCERNS ABOUT VERY LONG TRAINS

Today, trains are being built that can reach lengths more than 15,000 feet. The recent practice of operating very long trains has magnified the blocked grade crossing issue especially when a long train is stopped within a small town or village cutting off access at multiple crossings.

Some of the trains being assembled are so long, that they do not fit within the existing sidings, or inside rail yards. This has resulted in railroads often using their main line to couple railcars together causing additional problems with blocked roadway access.

Additionally, the operation of these very long trains presents challenges to train crews especially when navigating curves and grades. The distribution of loaded and empty cars, as well as the placement of distributed power throughout a train present significant challenges in train make-up, which if done improperly, can lead to derailments and damage to equipment.

Finally, longer freight trains can negatively impact the timeliness of passenger trains. In locations where freight and passenger trains operate on the same tracks, faster passenger trains are often forced to wait for a freight train to clear because the longer freight train is unable to fit in to an existing siding. As a result, passenger trains often suffer long delays while waiting for freight trains to clear.

RECENT ACTIONS BY RAILROADS TO DEMAND THAT LOCAL APPLICANTS PAY ANNUAL MAINTENANCE COSTS FOR CROSSING SIGNAL UNITS AT HIGHWAY-RAILROAD GRADE CROSSINGS.

Railroads are statutorily required to inspect and maintain all signal and railroad crossing devices along their lines. Recently there have been attempts by some railroads to pass through on-going maintenance costs to local municipalities when new or upgraded devices are installed. There have been recent attempts by some railroads to assess annual maintenance fees to the local applicant, payable to the railroad in perpetuity, and in some cases, under threat of unilateral closure. The projects impacted by these actions include crossings which are:

- Upgraded with new signal equipment
- Upgraded from a passive crossing to an active one
- Opened where one did not previously exist
- Altered in such a way that the railroad considers the crossing project a new crossing

As a result, many projects which would be done to enhance grade crossing safety, are stalling, or being canceled. In certain circumstances, project scopes are being revised to eliminate the upgrading, replacement, or installation of gates and lights so as not to trigger the maintenance fee requirement. In so doing, aging crossing equipment will continue to degrade and ultimately malfunction while sourcing repair and replacement parts becomes more difficult. This barrier to equipment enhancement compromises the safety of the traveling public, to include pedestrians, bicyclists, etc. The actions by some railroads to assign maintenance costs to local applicants has reversed decades-long cost apportionment practices, as codified in many state statutes, which placed the maintenance responsibility on the railroad.

As many crossing projects are tied to Federal Highway Administration funding via 23 USC §130, states are beginning to have difficulty obligating these appropriated funds in a timely manner. The risk of funds lapsing in any given fiscal year has become a real impediment to their use. The strict guidelines governing the scoping and use of §130 funds make it impossible to expand their application to other safety priorities, further adding to the challenge of fund obligation.

THE COSTS FOR A PRELIMINARY ENGINEERING (PE) AGREEMENT HAVE INCREASED DRAMATICALLY.

A PE agreement is necessary for railroad employees and/or consultants to travel to and survey the location of a potential crossing project. The railroad representatives participate in diagnostic meetings to plan for the proposed improvement project. The PE expense assessed by the railroad is charged to the entity requesting the project which is often a public entity (state, municipality, county, etc.). The charges being assessed to municipalities for preliminary assessments have skyrocketed over the last decade and appear to be well over the market value for the service being provided. For example, municipalities that have typically paid $10,000 for a PE assessment are now being assessed $30,000 to $50,000. Smaller communities with limited resources pursuing crossing upgrades and improvements, struggle to obtain the funds necessary to execute a PE agreement. This often results in delays and sometimes cancellation of important grade crossing improvement projects.

CONCLUSION

As members of the ASRSM, we are confronted with these issues daily. Our organization is comprised of railroad professionals located across the country from all political persuasions. We bring these issues forward to the committee because the rules in place for railroading are created by the Federal Government and most typically state rules and regulations are preempted. We ask that Congress formulate reasonable solutions to these critical safety issues, and work with the Administration to set rules that will effectively address these problems.

Respectfully,

THE ASSOCIATION OF STATE RAIL SAFETY MANAGERS.

Mr. PAYNE. I would like now to welcome our second panel of witnesses: Mr. Roy L. Morrison, director of safety, Brotherhood of Maintenance of Way Employes Division, International Brotherhood of Teamsters; Don Grissom, assistant general president of the Brotherhood of Railway Carmen Division, TCU/IAM; Mr. Grady Cothen, retired, transportation policy consultant; Mr. Nathan Bachman, vice president of sales and business development, Loram Technologies, Incorporated; Ms. Cindy Sanborn, executive vice president and chief operating officer, Norfolk Southern Corporation and chair of the Association of American Railroad's Safety and Operations Management Committee; and Mr. Jeremy Ferguson, president, Sheet Metal, Air, Rail, Transportation–Transportation Division.

Thank you, all, for joining us today, and I look forward to your testimony.

Without objection, our witnesses' full statements will be included in the record. Since your written testimony has been made part of the record, the subcommittee requests that you limit your oral testimony to 5 minutes.

Mr. Morrison, you may proceed.

TESTIMONY OF ROY L. MORRISON III, DIRECTOR OF SAFETY, BROTHERHOOD OF MAINTENANCE OF WAY EMPLOYES DIVISION, INTERNATIONAL BROTHERHOOD OF TEAMSTERS; DON GRISSOM, ASSISTANT GENERAL PRESIDENT, BROTHERHOOD OF RAILWAY CARMEN DIVISION, TCU/IAM; GRADY C. COTHEN, JR., RETIRED, TRANSPORTATION POLICY CONSULTANT; NATHAN C. BACHMAN, VICE PRESIDENT OF SALES AND BUSINESS DEVELOPMENT, LORAM TECHNOLOGIES, INC.; CYNTHIA M. SANBORN, EXECUTIVE VICE PRESIDENT AND CHIEF OPERATING OFFICER, NORFOLK SOUTHERN CORPORATION, AND CHAIR, SAFETY AND OPERATIONS MANAGEMENT COMMITTEE, ASSOCIATION OF AMERICAN RAILROADS; AND JEREMY FERGUSON, PRESIDENT, SHEET METAL, AIR, RAIL, TRANSPORTATION–TRANSPORTATION DIVISION

Mr. MORRISON. Thank you, Chairman Payne, Ranking Member Crawford, and members of the subcommittee. I am Roy Morrison, director of safety for the Brotherhood of Maintenance of Way Employes Division of the Teamsters. BMWED represents more than 30,000 railroad workers who do inspection, construction, maintenance, and repair of tracks, roadbeds, bridges, structures, and facilities on railroads. BMWED members have raised these issues as the most pressing.

Precision Scheduled Railroading has produced historical record profits and historically low staffing levels in the railroad industry. Before COVID, employment on Class I's was cut by over 30,000, and during COVID, employment has been cut by thousands more. Now, even as traffic has returned, staffing levels have not. Maintenance-of-way employees are working over 80 to 100 hours a week doing track maintenance in multiple territories for months on end.

While railroads refuse to fill open positions and continue furloughs, prior to PSR workforce cuts, BMWED commissioned an occupational safety and health research study by highly credentialed medical and academic researchers with expertise on workplace safety and health. The full study is available on BMWED's website. But the key finding of our study is that our members face significantly higher levels of disease and injury compared to workers in other industries. Severe understaffing is only making these issues worse.

Additional maintenance-of-way forces and more stable work schedules would provide some relief. With my written testimony, I have shared letters from our members about current conditions where they are pressed to cut corners, defer maintenance, skip steps, not to work the standards they were trained to and met prior to PSR. We ask the committee to continue to stay on top of the issue and take further actions to mitigate damages caused by PSR.

Starting in 2018, all the Class I railroads began test programs referred to as automated track inspection, but it is not new. ATI is just autonomous track geometry measurement systems, which have been in use since the 1970s and were never designed for FRA-mandated track inspections. But waivers submitted to FRA showed the railroads want to cut human track inspections by up to 80 percent even though there are defects that machines cannot detect.

What ATI can do is identify track geometry defects, which make up about 26 percent of the total defects FRA requires to be inspected for. Taking human track inspectors off the tracks leave 75 percent of track defects unmonitored. Railroads can add all the technology they want without safety waivers. The track geometry systems are already used on Amtrak at the frequencies the freight railroads have tested. Amtrak doesn't need safety waivers to do this. No railroad does.

It is vital to the safety of rail employees and the public that manual in-person inspection frequencies remain at the current levels mandated by Federal regulation. Recently, the AAR has complained the FRA is not rubberstamping requests to reduce human inspections. The AAR is wrong. FRA should scrutinize these waiver requests and Congress should make it clear that the FRA has your support.

I wanted to note, BMWED greatly appreciates Administrator Bose. My testimony is not meant to be critical of him or the work he is doing at FRA. We are just highlighting several issues that have gone unresolved across multiple administrations. BMWED thanks the NTSB for including roadway worker safety on its agency's 2021–2022 Most Wanted List.

We also ask Congress to elevate 49 CFR 214.329 from regulation to statute. The regulation requires provisions of warning equipment such as whistles, air horns, white disks, red flags, lanterns, or fuses to provide warning of oncoming trains, but the Class I's just make roadway workers yell over the noise, and FRA has ignored our request for stricter enforcement.

The punitive damage standard for retaliation against whistleblowers is the exact same as the standard to disqualify railroad managers, but our efforts to get FRA to follow through have been ignored for years. Failing to penalize managers encourages retaliatory conduct. We just ask existing regulations be enforced against bad actors.

Excepted track regulations permit railroads to designate track as exempt from compliance with minimum safety requirements. It was meant to provide short-term regulatory relief 40 years ago, but railroads use it to cut costs and avoid maintenance.

A 2020 NTSB report said of a worker fatality in Arlington, Texas, quote, "contributing to the accident was the designation of the accident track as excepted track under current FRA track safety standards, which allowed inadequate track conditions to exist on track used regularly" end quote. Congress should sunset "excepted track."

I would like to thank you for your opportunity to raise these concerns. Thank you.

[Mr. Morrison's prepared statement follows:]

Prepared Statement of Roy L. Morrison III, Director of Safety, Brotherhood of Maintenance of Way Employes Division, International Brotherhood of Teamsters

Thank you, Chairman Payne, Ranking Member Crawford and members of the Subcommittee. I am Roy L Morrison III—Director of Safety for the Brotherhood of Maintenance of Way Employes Division of the International Brotherhood of Teamsters (BMWED–IBT). My union represents more than 30,000 railroad workers who

perform inspection, construction, maintenance, repair, and dismantling of tracks, roadbeds, bridges, structures, and facilities on railroads throughout the United States, including the major Class I freight railroads as well as many of the largest commuter lines in the country. BMWED's membership is comprised of highly skilled workers who are proud to perform their trade that is vital to the American rail network and its reliability to the US supply chain.

As Director of Safety, I am responsible for leading the union's Safety Department, monitoring and addressing health and safety issues for BMWED across the country, and serving as the union's primary staffer engaging with Congress and agencies on legislative and regulatory issues affecting the health and safety of our members. Prior to my current role, I was an Internal Organizer on BMWED's Communication Action Team (CAT) where I interacted with our members from virtually every railroad across America to stay current on the issues they experienced on the job. I started my career as a Maintenance of Way (MOW) employee for 19 years at the Union Pacific Railroad doing construction, maintenance and repair to the tracks, structures, and bridges throughout the 14 states in the UP northern system.

Thank you for giving the BMWED the opportunity to share with you the safety concerns we see through the eyes of our Members in the rail industry and the detrimental impact these issues may have on the American people. Specifically, BMWED is concerned that: (1) current railroad staffing levels are dangerously low; (2) automated track inspection technology is an unacceptable substitute for human track inspections; (3) railroads are providing insufficient protection for roadway workers from oncoming trains when they are working on or near active rail lines; (4) railroad managers must be disqualified following safety sensitive violations; and (5) the "excepted track" loophole that allows railroads to run over substandard tracks must be closed.

(1) Railroads Are Dangerously Understaffed

In 2015, many of the Class I railroads began implementing the Precision Scheduled Railroading (PSR) business model that has turned the industry upside down. The focus of PSR is to reduce a railroad's operating ratio, which is the proportion of operating expenses to operating income. While PSR's across-the-board and ruthless cost-cutting has produced historically low operating ratios and historical record profits for the railroads, it also has produced historically low staffing levels in the industry.

Between 2016 and 2020, before COVID, railroad employment on the four largest Class I railroads was reduced by over 30,000. In 2016 Class I employment was at 153,000, by 2020 it was at 120,000. The reductions in forces have continued and by December of 2021, Class I employment was at 114,499. Even as traffic has returned, the staffing levels have not. By the end of 2021, carloadings were only 2.6% below carloadings at the end of 2019; revenue had returned to the levels at the end of 2019. By December of 2021, a workforce 81% of the size of the 2019 workforce was responsible for moving 97.4% of 2019 carloadings.

Along with these staffing cuts, railroads have curtailed inspection, maintenance and repair work on their infrastructure and equipment, and required a reduced workforce to handle the responsibilities once handled by a significantly larger workforce. The railroads have made it difficult to impossible for their employees to properly perform their tasks that are essential to adequate rail service. There's simply not enough time to perform the tasks and our members are spread thin covering impossibly expanded work territories.

MOW employees are working over 100 hours a week to perform track maintenance on multiple territories for months on end. Roadway workers, in charge of the safety of the men and women working on track, are working weeks without a day off while railroads refuse to fill positions left open due to retirements, and have continued to furlough MOW workers.

Prior to the massive workforce cuts caused as a direct result of PSR the BMWED embarked on an Occupational Safety and Health research project. A Summary Report was authored by a team of highly credentialed medical and academic researchers with expertise in workplace safety and health, performing studies both nationally and internationally. The full research project includes three separate areas of study: (1) epidemiology, (2) ergonomic and physical hazards, and (3) social and economic impacts.

This study found significant elevated levels of disease and injury compared to workers in other industries, accompanied by substantial negative economic and so-

cial impacts.[1] The increased mental and physical toll from severe understanding placed on MOW workers only exacerbate these issues. And many of these issues could be mitigated by the railroads hiring additional MOW forces and providing more stable work schedules.

Cuts to personnel mean the loss of industrial and institutional knowledge, both of which are critical to the performance of railroading work and ultimately, the performance of the American railroad system. Railroading is a highly skilled trade and it takes years to master. Railroad employers working crews so short staffed makes on the job training all but impossible. One of the profound impacts we have seen regarding training of new MOW forces is when seasoned employees retire, they take a knowledge trust with them without any opportunity to train the new work force.

In recent years we have seen an unprecedented number of MOW employees retire early or quit mid-career. Until recently it was almost unheard of for Maintenance of Way Employees to quit after acquiring a number of years of seniority because the jobs were always considered good jobs with good pay and good benefits. But the jobs have been degraded by the railroads with respect to working conditions and by pressure to work faster with less coworkers and resources often over larger service territories, cut corners and ignore or defer repairs. In a statement submitted to the Surface Transportation Board (STB) for its multi-day hearing on Urgent Issues in Freight Rail Service (Ex Parte No. 770), BMWED submitted copies of letters and statements from MOW employees describing how the jobs have been degraded and working conditions have deteriorated since the implementation of PSR. I am including copies of these letters as Exhibit A accompanying my testimony so that the Committee can hear directly from our members about how they can't continue to perform the work in good conscience under current conditions where they are pressured to cut corners/defer maintenance/skip steps/not work to the standards they were trained to and met through their careers until more recent years with the adoption of PSR.

Chairman Payne, BMWED thanks you and Chairman DeFazio for requesting that the U.S. Government Accountability Office (GAO) examine the impacts that the implementation of PSR by Class I railroads is having on workers and safety.[2] We also thank you for holding hearings in March[3] and May[4] of this year where rail labor and the Chairman of the STB have been able to testify about PSR. Staffing levels must be restored and the policies designed to ruthlessly cut corners that are driving good people from the industry must be ended. We ask that the Committee continue to stay on top of this issue and take further action to mitigate the damage caused by this cost-cutting value extraction business model called "PSR".

(2) Automated Track Inspection Is Not a Substitute for Manual-Visual Inspection Done by Trained Track Inspectors

Starting in 2018 all of the Class I railroads embarked on various test programs they refer to as Automated Track Inspection systems (ATI). In testimony before this Committee last year, the President and CEO of the Association of American Railroads (AAR) complained that the Federal Railroad Administration (FRA) is not automatically approving waivers of track inspection safety rules that set the required frequency of human track inspections. That's wrong. The FRA is absolutely right to scrutinize these waiver requests. And Congress should make it clear that FRA has your support.

Although ATI sounds new and "cutting edge" the fact is that all the tests approved by FRA exclusively rely on Autonomous Track Geometry Measurement Systems (ATGMS). That just means the railroads are using track geometry systems which have been in use on the railroads since the 1970's. These track geometry systems were never designed to complete FRA mandated track inspections. What those track geometry systems can do is identify track geometry defects—which make up about 26% of the total defects that FRA requires to be inspected. A full list of the defects is available at 49 CFR §213 sub part B–E.

Railroads are trying to replace human visual track inspectors who have the ability to identify 100% of these defects (as well as a number of non-regulatory defects)

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[1] The full summary report is available at https://www.bmwe.org/cms/file/08232018__145843__HSsurveyResults.pdf.

[2] https://transportation.house.gov/news/press-releases/chairs-defazio-and-payne-jr-request-gao-study-on-the-impacts-of-precision-scheduled-railroading-on-workers-safety-and-shippers.

[3] https://transportation.house.gov/news/press-releases/chairs-defazio-payne-jr-statements-from-hearing-to-discuss-the-surface-transportation-board-reauthorizations-role-in-improving-rail-service-in-the-us.

[4] https://transportation.house.gov/news/press-releases/chairs-defazio-payne-jr-statements-from-hearing-on-the-surface-transportation-boards-role-in-resolving-freight-rail-conflicts.

with a technology that only has the ability to identify approximately 26% of them. Taking human track inspectors off the tracks leaves almost 75% of track defects unmonitored and puts us all at risk. Additionally, human track inspectors are required to make "immediate remediation" of the defects they find on—which help keep the trains moving with less disruption. The machines cannot do that.

Rail labor supports the expanded use of these track geometry systems to assist experienced human track inspection professionals, but the waivers submitted to FRA indicate that the railroads want to cut human track inspections by up to 80% below current levels while sorting out whether the new technology actually works for defects it does check, and even though there are defects the machines cannot detect. Claims that the FRA or rail labor is preventing greater deployment of these machines is simply false.

Railroads can add all the new technology they want without FRA safety waivers. They could run the systems every day if they chose to. On Amtrak's class 6–8 tracks, track geometry systems are already used at the same frequencies the railroads want without FRA safety waivers. But Amtrak is adhering to the existing required schedule for human track inspections. Taking human track inspectors off the track and replacing them with track geometry systems that are not even designed to evaluate all the defects assessed by inspectors puts lives at risk.

It is vital to the safety of rail employees and the public that manual in-person inspection frequencies remain at their current mandated levels by the federal government. And Congress must not let the railroads get away with trying to bully FRA into rubber stamping safety waivers to get around the established safety minimum human visual inspections frequencies.

(3) Roadway Worker Protections

BMWED would like to commend the National Transportation Safety Board (NTSB) for including recommendations to improve protections for roadway worker safety on the agency's 2021–2022 "Most Wanted List" of recommendations to save lives.[5]

An additional measure to protect BMWED's roadway worker members would be to simply enforce existing FRA regulations for safety equipment to provide warnings of oncoming trains. Because FRA has had years to enforce this minimum standard for roadway worker safety and failed to do so, Congress should elevate this requirement from regulation to statute.

Railroad watchmen/lookouts for roadway workers protect their co-workers from oncoming trains when they are working on or near active rail lines. Current regulations (49 CFR §214.329) require provision of warning equipment to watchmen/lookouts such as whistles, air horns, white disks, red flags, lanterns, or fuses. The equipment required by this regulation is clearly defined and is essential to roadway worker protection for employees working on or near active rail lines, but railroads frequently fail to provide it. In fact, BMWED investigated practices currently in place on all the Class 1 Railroad properties and discovered that only Amtrak is currently in compliance with the equipment regulations for FRA train approach warnings provided by watchmen/ lookouts.

Still, FRA has not enforced the requirement. Instead, the freight railroads encourage use of "verbal" warnings (i.e., yelling), rather than use of the equipment mandated by the regulation. This is despite the continuing occurrence of roadway worker fatalities where unequipped watchman/lookouts were a primary or contributing factor (La Mirada, CA 5/7/08, Sunshine, AZ 1/23/2009, Minneapolis, MN 5/25/15, Edgemont, SD 1/17/17, and Estill, SC 11/30/18). Just getting the proper warning equipment is a simple solution that will save lives.

Again, given FRA's failure to enforce this minimum standard for roadway worker safety, BMWED asks Congress to elevate this requirement from regulation to statute.

(4) Railroad Managers Must Be Disqualified Following Safety Sensitive Violations

For years, BMWED has been raising the issue that FRA must take action to disqualify railroad managers who have been found by a federal court or administrative body to have willfully and intentionally retaliated against a railroad employee whistleblower for reporting safety issues. BMWED's efforts to get FRA to enforce existing regulations have been ignored.

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[5] https://www.ntsb.gov/Advocacy/mwl/Pages/mwl-21-22/mwl-rph-02.aspx.

In 2012, the Occupational Safety and Health Administration (OSHA) issued a Memorandum of Agreement (MOA) to address non-enforcement of FRA's regulations contained in 49 CFR Part II, § 209.303 and § 225.33.[6] In 2016, BMWED submitted a FOIA request to FRA with a list of ten whistleblower protection (49 USC §20109) cases in which OSHA, Administrative Law Judges, DOL's Administrative Review Board, and/or federal courts held that railroads, whose managers willfully and intentionally retaliated against their workers, were punished by imposition of punitive damages.[7] The list from FRA identified each offending railroad manager and summarized the details of the offensive acts and intentionality of those acts. Even though the §20109 findings in all ten cases fully satisfied the FRA's presumption of guilt sustaining manager disqualification under 49 CFR §209.329(a), FRA *never* initiated and completed any proceedings to establish potential violation of the provisions of §209.303 and/or Internal Control Plan (ICP) requirements in *any* of these ten cases (or any others).[8] The FRA continued its policy of not enforcing these regulations after the information from the FOIA request was revealed.

BMWED has raised these issues with FRA multiple times—including in 2018 and 2021. Failing to properly penalize these managers encourages retaliatory conduct. It leads to a culture of impunity that makes the railroads less safe. All that is required to address this is for FRA to simply enforce existing regulations to disqualify these railroad managers who have been found to have willfully and intentionally retaliated against a railroad employee whistleblower for reporting safety issues.

(5) The "Excepted Track" Loophole That Allows Railroads To Run Over Substandard Tracks Must Be Closed

Excepted track regulation permits railroads to designate track as effectively exempt from compliance with minimum safety requirements for roadbed, track geometry and track structure. This was meant to be a short-term solution to help railroads that were suffering 40 years ago. There is no excuse for its continued existence.

The "excepted track" regulatory loophole was added to FRA regulations in 1982 to provide regulatory relief following a series of railroad industry bankruptcies in the 1970s. When adopted, FRA believed that the designated tracks would be located in yards or otherwise on comparatively level terrain in areas where the likelihood was remote that a derailment would endanger a train crew or the general public. Further, it was anticipated that the Excepted Track rules would be applied for limited periods of operation over track maintained at less than the established minimum safety standards, scheduled for abandonment or later improvement. But railroads have applied the Excepted Track regulation far more extensively.

In 1997, some minor changes were added to 49 CFR § 213.4. Some of the additions were an attempt to close loopholes in the regulations, but the entire concept of excepted track is an unacceptable safety loophole. Even after the 1997 changes, current rules are used by rail carriers to designate track as excepted in order to avoid track maintenance and encourage tolerance of dangerous track conditions, even on trackage producing revenue adequate to support track maintenance.

As a recent example of the severity of the issue, in a September 2020 Railroad Accident Brief issued by the NTSB following a 2017 derailment in Arlington, Texas that resulted in a railroad worker fatality, the NTSB wrote "[b]ecause of the excepted track designation, conditions were present at the POD [point of derailment] that otherwise would not be permitted if the track was designated as Class 1 or higher" and "[c]ontributing to the accident was the designation of the accident track as excepted track under the current FRA Track Safety Standards, which allowed inadequate track conditions to exist on track used regularly."[9]

There is no excuse for why a short-term solution from 40 years ago that was designed to help railroads that were dealing with a series of bankruptcies should continue to exist. The "excepted track" loophole should be sunset. Carriers should only be allowed to designate sections of track as "Excepted" for a limited period of time

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[6] *Memorandum of Agreement Between the Federal Railroad Administration U.S. Department of Transportation and the Occupational Safety and Health Administration U.S. Department of Labor* on July 16, 2012.

[7] The FRSA's §20109 punitive damage standard is virtually identical to FRA's standard for disqualification of railroad managers for violation of safety-sensitive regulations. Reference to §20109 punitive damage findings provide a compass course of clarity for FRA enforcement of §209.303.

[8] As in earlier years, the FRA's *Annual Enforcement Reports* for FY 2019 and 2020 reveal no rail managers were disqualified or subjected to a hearing. FRA's public databases do not appear to provide information concerning violations of ICPs for retaliatory management behavior.

[9] https://www.ntsb.gov/investigations/AccidentReports/Reports/RAB2002.pdf.

(no more than 5 years). After expiration of such time, track should be brought into compliance with FRA Class I track standards.

Again, on behalf of the more than 30,000 members of BMWED, thank you for the opportunity to raise these concerns about health and safety issues in the railroad industry today.

EXHIBIT A

[Exhibit A is retained in committee files and is available online at: https://docs.house.gov/meetings/PW/PW14/20220614/114882/HHRG-117-PW14-Wstate-MorrisonR-20220614-SD001.pdf]

Mr. PAYNE. Thank you.

Next we will have Mr. Grissom for 5 minutes.

Mr. GRISSOM. Chairman Payne, Chairman DeFazio, Ranking Member Crawford, and members of the subcommittee, thank you for the opportunity to testify today on the important issue of freight rail safety. My name is Don Grissom, and I am a 41-year railroader currently serving as the assistant general president of the Brotherhood of Railway Carmen, a division of the Transportation Communications Union, or TCU/IAM.

Our members inspect, maintain, and repair railcars on our Nation's railways. I am here today to speak about the difficulty of the carman craft and how recent changes to the railroad business model has increased pressure from management and have created a disaster waiting to happen.

First, let me emphasize that these carmen jobs are skilled positions. Upon hiring, a carman apprentice spends 732 working days, six different 122-day phases to become a journeyman. During this time, a carman becomes highly skilled at inspecting and repairing railcars.

And, while freight cars may appear simple, the mechanics of a freight car is quite complex. It includes airbrake systems, brake assemblies, wheels, draft gears, yokes, couplers, handholds, and other safety appliances, all of which is required to be in working order per Federal regulation for a train to operate safely.

Like other crafts, carmen have been cut to the bone in the PSR era. We have lost anywhere from 15 to 30 percent of our craft, depending on the railroad. And, since PSR, it amounts to doing less with less or moving fewer carloads with fewer employees. And the effect on the carmen is one of the consistent and sustainable pressure on employees, pressure not to inspect or repair railcars, pressure to turn a blind eye to AAR and FRA defects, pressure to work so much forced overtime that your body becomes dangerously fatigued. This is the life of a carman in the PSR era. It is the only career I am aware of where they train you to do a job and they fire you when you do it.

Please remember, one defective railcar can derail an entire train. Since each car has up to 90 inspection points per car per side, or 180 in total, carmen were allowed around 3 minutes per car on inspection. That is until the PSR era. Today, in most locations, on all the Class I's, carmen only allowed 1 minute for inspection, and I provided evidence in my written statement. As a result, cars often go uninspected. Even if they are found defective, if the car will still roll down the track, management tells them to send it out regardless of whether the brake system or other critical components are in working order.

All of this is due to the pressure that applies to the local management and workers to do whatever it takes to get the train out. In August of 2021, the FRA performed a safety audit on the UP. Unfortunately, we heard reports that local management was given a heads-up so they could sweep all the defects under the rug, and the FRA still found defective cars. We also encourage the FRA to pay special attention to yards where carmen have been fully removed from the property. A list of those yards is included in my written statement.

Finally, some attention has been paid to railroad workers on fatigue issues in the industry, but not enough. As noted today, carmen are being forced to work overtime consistently. Many reports of forced overtime include 16-hour shifts, 5 to 6 days in a row. Many of our members sleep in their cars between the shift so they can get an extra hour or 2 hours of rest instead of wasting time commuting home and back. This is not a healthy environment.

A wise colleague of mine said to me: The railroads are burning the candle at both ends. They are burning their customers on one and burning out their employees on the other. Thank you for this opportunity to testify.

[Mr. Grissom's prepared statement follows:]

Prepared Statement of Don Grissom, Assistant General President, Brotherhood of Railway Carmen Division, TCU/IAM

Chairman Payne, Chairman DeFazio, Ranking Member Crawford, and Members of the Subcommittee, thank you for the opportunity to testify today on the important issue of Freight Rail Safety.

My name is Don Grissom, and I currently serve as Assistant General President of the Brotherhood of Railway Carmen, a division of the Transportation Communications Union, or TCU/IAM.

The Carmen Division represents employees on the railroads that inspect, maintain, and repair rail cars, all across the country, at every Class 1 railroad, Amtrak, commuter railroads, and some short lines.

I have 41 years of railroad experience, having begun my career in 1981 on the C&O Railroad in Grand Rapids, MI, and later at CSX out of Richmond, VA. I have attended NTSB classes in Northern Virginia, and have participated in derailment and rail fatality accident investigations. Since 2011, I have served by appointment of the Secretary of Transportation to the Rail Safety Advisory Committee, or RSAC.

I'm here today to speak about the difficulties of the Carman craft and how recent changes to the railroad business model and increased pressures from management have created a ticking time bomb on our nation's rails.

Rail cars are both simple and complex. Their simplicity and uniformity in design allows cars to be interchanged universally between railroads, aiding in the free flow of freight commerce across America. That said, the mechanics of freight cars are complex, and include airbrake systems, brake assemblies, wheels, draft gears, yokes, couplers, handholds and other safety appliances, as well as many other components that are all required to be in working order—per federal regulations—for a train to operate safely.

Upon hiring, a Carman Apprentice spends 732 working days (6 different 122-day phases) to become a Journeyman. During this time, a Carman becomes highly skilled at inspecting and repairing rail cars. Importantly, Carmen acquire many skillsets on the job that can be utilized outside the industry, such as metal-working, welding, and fabrication.

PSR ERA

Like other crafts, Carmen have been cut to the bone in the PSR era. Depending on the carrier, we've lost anywhere from 15–30% of our craft. This alone wouldn't necessarily impact safety if rail car loads had been cut by the similar ratios, but that isn't the case. Rail traffic has largely stayed the same or declined only slightly.

And, as many in the rail industry say—at least those outside of Class 1 C-Suites—PSR amounts to doing "less with less"—or moving fewer car loads with drastically fewer employees.

The net effect on Carmen is one of constant and sustained pressure on employees. Pressure not to inspect or repair rail cars. Pressure to turn a blind eye to AAR and FRA defects. Pressure to work so much forced overtime that your body becomes dangerously fatigued.

All of this pressure is dictated by corporate leadership and executed by regional or local management. Even when local managers know what they're doing to their employees is wrong or unsafe (since they came off the crafts themselves), they're forced to make our members' lives miserable under penalty of their own termination.

That is the life of a Carman in the PSR era. It's the only career I'm aware of where they train you to do a job, then fire you for doing it.

1 Minute Per Car

As mentioned above, a freight rail car—while seemingly simple—is a complex piece of equipment. And since one defective car can derail an entire train, it's important to make sure every FRA-required component has been inspected to be in working order. Each rail car has up to 90 inspection points, per car, per side (up to 180 in total). That's why, for most of my career, Carmen were permitted around 3 minutes per car on predeparture inspections.

That is, until the PSR era.

Today, in most locations, on all the Class 1s, Carmen are only allowed ~1 minute for predeparture inspections. Carmen used to get underneath cars to perform physical touch inspections of components, but now they only get a brief visual inspection. And it's not just our craft either. Machinists—those that inspect and maintain locomotives—have been given similar time reductions as well, not to mention the operating crews' strict time constraints, as other unions can attest.

A 12-year Carman on Union Pacific recently detailed the issue to me: "On a 150 car train, we're only allowed 2.5 hours maximum to perform inspections. However, when the FRA is on the property, that rule changes to 4 hours and they give us four Carmen to do it. But as soon as the FRA leaves, it's back to business as usual."

Why do this? Simple: profits.

At the yard this Union Pacific Carman hails from they had 74 Carmen on duty in 2018. Now, they have 24. Fewer people not only costs the railroads less, but the implied and direct pressure on the remaining Carmen—and all rank-and-file railroaders—is that if you don't do the job as instructed, you're gone.

I have attached written proof of the one-minute per car policy mandated by the railroads today, including:

- A memo to Car Foremen at Union Pacific's Proviso Yard in Chicago, IL.
- A time claim at CSX where they first admitted their policy in writing.
- Safety metrics from Norfolk Southern showing "Man Minutes Per Car" (MMPC), allowing 1.1 minutes per car on inbound trains, and 1.7 minutes per car on outbound trains.

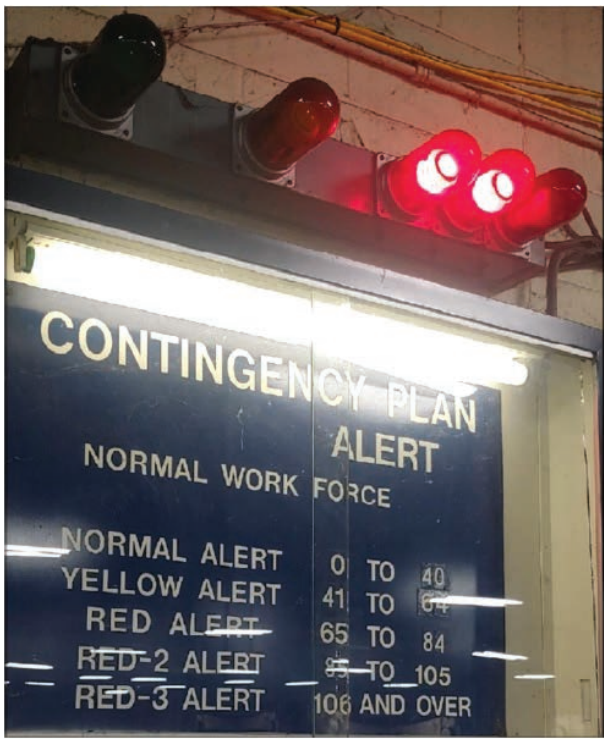
Pressure NOT to Shop Cars

As a result, cars often go uninspected. And even if they are inspected, if the car will still roll down the track, they send it out, regardless of whether brake systems or other critical components are defective.

Screenshot from pre-PSR CSX Carman Training Video, which specifically emphasizes that all rail cars must have operational brakes. Source: ''CSX Train Air Brake Test'', SafeRailroading Youtube Channel, April 30, 2013. https://youtu.be/3ISOh-ES-o8

All of this is due to the pressures applied to local management and workers to do whatever it takes to get the train out the door. Terminal dwell is a key metric by which C-Suite executives are scrutinizing managers, so any increase in dwell time places their jobs at risk, which forces them to work our members to the bone.

At one CSX shop, the railroad utilizes a "traffic light" system to alert Carmen (and others) as to how much work the repair shop has backing up. Green means "go ahead and send Bad Orders to the shop," Yellow means "We're getting full in the shop," and Red means "Do NOT send any more Bad Orders to the Shop."



CSX ''traffic light'' system used to pressure Carmen NOT to find bad order (aka defective) rail cars

After the FRA issued concerns about the traffic light system, CSX simply moved the system to a virtual database. The pressures to local managers and shop craft employees remains.

While CSX maintains that it's simply a visual tracking system for repair work, in practice the system is used to pressure and intimidate employees NOT to do their job, which is to inspect and "cut out" defective rail cars. For obvious reasons, this system is inherently problematic as it runs counter to safety.

Unfortunately, this system also exists virtually at every yard, and metrics are specifically focused on the amounts of Bad Orders as well as dwell times.

UP Safety Audit—August, 2021

From August 1st through August 14th, 2021, the FRA audited a few Union Pacific rail yards. According to the report, the FRA only saw a defect ratio of 3.3% of rail cars. Let me tell you why that's inaccurate or incomplete.

First, our members report that the FRA Safety Management Team (SMT) 6, which covers UP and KCS, communicated to Union Pacific ahead of time what yards they would be inspecting, allowing the company to prepare and get equipment up to code while also escorting inspectors around pre-selected sections of the yard—and they still found defects. Furthermore, our members reported that the FRA often wouldn't go to the main yards, but rather only the side or satellite yards, and they rarely—if ever—bothered to talk to our Carmen on duty. One would think if the FRA field inspectors are interested in mechanical safety, they would spend time talking to the folks on the ground that inspect for safety compliance.

Second, to our knowledge, the FRA did not audit any of the yards where Carmen have been fully removed from service and replaced with "Utility workers," a somewhat flex position that is not a qualified mechanical inspector, nor can they perform repairs. There are several yards that currently have either no Carmen or only a single Carman assigned to inspect. These yards include:

- Kansas City, KS, 18th Street Yard—Removed 20 Carmen. Having Utility positions perform inspections. Carmen only sent to make repairs flagged by Utility or FRA.
- Herrington, KS—Removed 13 Carmen. Having Utility positions perform inspections. A "Travelling Carman" is dispatched from Wichita, KS if a repair is flagged.
- Wichita, KS—Removed 12 Carmen. Switchmen now performing inspections. Two "Travelling Carmen" make repairs if any are found.
- St. Louis, MO—Removed 8 Carmen. Traincrews are performing all inspections in this yard.
- Dallas, TX, Miller Yard—Removed 14 Carmen. Traincrews and Utility are doing all inspections.
- Arlington, TX—Removed 3 Carmen. Traincrews and Utility are doing all inspections.

- Texarkana, TX—Removed 5 Carmen. Traincrews and Utility are doing all inspections.
- Spring, TX, Lloyd/Spring Yard—Removed 4 Carmen. Traincrews and Utility are doing all inspections.
- Beaumont, TX—Removed 12 Carmen. Replaced with 4 Utility men to do all inspections.
- Angleton, TX, Angleton Yard—Removed 6 Carmen. Replaced with 4 Utility men to do all inspections.
- Lake Charles, LA—Removed 2 Carmen. Replaced with 2 Utility men to do all inspections.
- Shreveport, LA—Removed 12 Carmen. Replaced with unknown number of Utility men to do all inspections.
- La Porte, TX, Strang Yard—Removed 5 Carmen. Replaced with unknown number of Utility men to do all inspections.
- El Paso, TX, Alfalfa Yard—Removed 17 Carmen (sent only 2 to Santa Teresa yard). Replaced with unknown number of Utility men to do all inspections.
- Pueblo, CO—Removed 2 Carmen. Train crews are now performing all inspections.
- Cheyenne, WY—Removed 8 Carmen. Only 3 left on the property.

We have asked the FRA Safety Management Team—6 (SMT) to inspect these yards in particular, and to do so without tipping off Union Pacific management. It is THESE yards where inspections, both inbound and outbound, are either not being performed at all or are not being done in full compliance with FRA regulations.

Fatigue Issues

Finally, some attention has been paid to railroad workers on fatigue issues in the industry, but not enough. And rarely are studies aimed at Carmen or other shop crafts. As noted, in the PSR era, Carmen are being forced into overtime constantly. Many report forced overtime to include 16 hour shifts, 5–6 days in a row. Many of our members sleep in their cars between shifts so they can get an extra hour or two of rest, instead of wasting time commuting home and back.

This is NOT a healthy working environment.

Workplace fatigue is generally considered a workplace hazard, as countless studies have shown, from both public (i.e. OSHA) and private studies. The risk for a railroad employee is further compounded by the nature of the work our members perform. Trains are incredibly heavy, unstoppable objects, and everything in a rail yard "hurts." Therefore, over the years regulations have placed emphasis on practices and policies to reduce those risks as much as possible. That's why we have blue flag protections, as well as strict training to perform job tasks in a safe, effective manner.

Unfortunately, a lot of those practices and policies get thrown out the window in the PSR era. And not necessarily by intention. Management isn't telling our members to perform tasks in unsafe manners. They're too smart to do that. But they don't have to, because it's all implied. The pressures on managers to reduce dwell times places further pressures on our members to cut corners not just on inspections, but on their own safety. I routinely hear from my Local Chairmen that they don't believe the pace that our members are being asked to work is safe, both for the trains and the members themselves.

These kinds of issues are hard to quantify. But in the interest of preventing the loss of another Carman's life or limb, I strongly urge the FRA and Congress to study and adopt policies that cover the whole health of shop and yard craft employees.

The issues raised today are all derived from the pressure placed on railroads to adopt these so-called "Precision Scheduled Railroading" practices. These pressures to cut headcounts and reduce dwell times run contrary to how our members were trained to ensure that trains on our nation's railroads are safe. It is truly a sad time in the rail industry.

When I began my career in 1981, we were at the beginning of the Staggers Act era, when railroads were having a tough time turning a profit, and our rolling stock and infrastructure was in deep disrepair. For the following 35 years, we—the working men and women of the rail industry—have turned things around to make the railroads profitable enterprises.

Approximately 6 years ago, PSR began spreading throughout the industry like a virus, once the leeches on Wall Street realized there was a profit to be made by extracting wealth out of the industry. Today, we have 45,000 (29%) fewer employees in the rail industry—and the cuts to the Carman craft are a significant portion. But in order to keep up with service demands, the much fewer Carmen throughout the industry are asked to do much much more.

As my colleague Matt Hollis stated before the Surface Transportation Board a few weeks ago: the relative quality of job is now gone. What were once considered highly-desired and competitive careers have been transformed into what you're seeing today: a labor shortage where the job is so unappealing that our members are either refusing recall or outright resigning their positions. This is NOT normal, nor is it sustainable.

A wise colleague of mine said to me: "the railroads are burning the candle at both ends—burning their customers one, and burning out their employees on the other."

I believe that to be true.

Thank you for the opportunity to testify.

ATTACHMENTS

[The attachments referenced in Mr. Grissom's prepared statement are retained in committee files and are available online at:
https://docs.house.gov/meetings/PW/PW14/20220614/114882/HHRG-117-PW14-Wstate-GrissomD-20220614-SD001.pdf]

Mr. PAYNE. Thank you, sir.

Next we have Mr. Cothen.

Mr. COTHEN. Mr. Chairman, members of the subcommittee, thank you for the opportunity to discuss railroad safety. I am here as an individual having retired from FRA in 2010 after a total of 36 years in the agency, two decades of which were as a senior executive working on railroad safety policy issues and including a stint as Associate Administrator for Safety. I concluded my term as Deputy Associate Administrator for Safety Standards.

My prepared statement provides some detail, but let me make three points very directly focusing for today on the management of in-train forces. You heard Administrator Bose refer to that and Mr. Chapman refer to that.

First, the immense progress that the railroads had made in safety over the past few decades has stalled out. Further progress has been arrested by the railroad's commitment to one form or another of so-called Precision Scheduled Railroading. One of the features of PSRs implemented has been the use of very heavy and long trains often marshaled without adherence to train makeup principles based on research and experience. Technology has sometimes been underutilized; at other times, technology has been applied beyond its demonstrated capacity.

The result has been a succession of embarrassing and dangerous accidents that need not have occurred. These are often characterized as human factor accidents with the implication that an employee has just made mistakes. But for the most part, they are organizational accidents driven by management decisions. Other accidents involving management of in-train forces are being reported as equipment related, but many equipment failures have resulted from excessive draft and buff forces in poorly assembled trains.

Second, the problem will not solve itself. Investors are demanding huge payouts in the form of stock buybacks and dividends. PSR is designed to deliver cash to the bottom line. The Congress and FRA need to place countervailing pressure on the railroads through tough but flexible safety regulations. Very likely, FRA cannot do it alone, given the propensity of industry to seek shelter or just endless delay in the excruciating regulatory process and the increasingly business-friendly Federal courts. Congress needs to provide direction.

Third, it is important for us to raise our eyes above the current morass and consider the future of rail technology. Today's braking technology was conceived in the 1870s, and it still has inherent limitations. We need electronically controlled pneumatic brakes. ECP brakes were developed by the AAR and suppliers in the 1990s. They were authorized for use in selected revenue service under waivers that I signed, and then they were authorized and incentivized by regulations that we issued in 2007.

At that point, the momentum died. When FRA and PHMSA tried to apply ECP brakes to high-hazard unit trains, the railroads fought it, even though most of the costs would have been paid by shippers and most of the benefits would have flowed to the railroads. We need a legislative mandate for FRA to move forward with the phased implementation of ECP brakes. The railroads will not protect their own future so long as the goal is short-term profitability.

This is the fact: When lavish returns on investment will not be realized within the tenure of current railroad managements, investment will be deferred. Positive Train Control took a legislative mandate and 35 years to get done. In the case of ECP brakes, progress has already been deferred for over two decades.

Mr. Chairman, to provide a better explanation of this complex topic, I have provided the committee, in addition to my prepared statement, my white paper on management of in-train forces, which is now in its third revision. It could also be found at the Railway Age website. I look forward to any questions the subcommittee may have. Thank you.

[Mr. Cothen's prepared statement follows:]

Prepared Statement of Grady C. Cothen, Jr., Retired, Transportation Policy Consultant

Chairman Payne, Ranking Member Crawford, Chairman DeFazio, Ranking Member Graves, and members of the Subcommittee, thank you for the opportunity to appear before you to discuss an important safety issue: management of in-train forces. I am here as an individual, not in a representative capacity. I have maintained a strong interest in transportation safety after a career of 36 years at the Federal Railroad Administration and additional work, following retirement from Federal service, for a passenger railroad and a major transit authority. Since 2016, I have been fully retired, although I remain a member of the District of Columbia Bar and several professional associations.

When we speak of managing in-train forces, we mean at least two things. The first is proper control of the train as a whole, ensuring that it will not exceed the permitted speed, that it can stop when and where it needs to stop, and that it will not roll away uncontrolled. The second is control of tensile (draft) and compressive (buff) forces within the train as it gains momentum, is slowed by braking effort, and gathers up or distributes "slack" among the locomotives and cars. If draft and buff forces are not properly controlled, excessive lateral over vertical forces can be translated to the wheel/rail interface, resulting in wheel lift or rail rollover. Significant damage can also be done to car components, often resulting in a train separation and an emergency brake application leading to a derailment.

The challenge of managing in-train forces has been with us throughout the history of railroads. From the advent of "automatic" train air brakes in the 1870's, to joint government and industry research on track/train dynamics in the 1970's, to the adoption of mandatory two-way end-of-train telemetry as a replacement for the caboose in the 1990s, and to the more widespread use of distributed power locomotives, this is a field that has benefitted from enhanced knowledge and improved technology.

Still, when FRA reported to this Committee in 2005[1], railroads continued to report train accidents related to train make-up and train handling. That pattern continues to the present date. There is good reason why the pattern should be disrupted. FRA research has developed and validated a computer model ("TEDS"[2]) which, like its industry counterpart ("TOES"[3]) is capable of evaluating management of in-train forces for purposes of accident investigation and accident prevention. Thus, it would seem to be time for FRA to take a more active role in overseeing this area of railroad safety, quite apart from the other developments.

What are the other developments? Driven by investor demands, major railroads have plunged head-long into one or more versions of so-called "Precision Scheduled Railroading" or PSR. This is an operating philosophy that has produced neither precision nor scheduled operations. It *has* succeeded handsomely in driving cash to the bottom line, facilitating massive distributions through stock buy-backs and dividends.

We all want our freight railroads to be profitable—none more than my generation of FRA personnel. As colleagues under successive Administrations, we helped the industry through the Northeast rail reorganizations, the bankruptcy of Midwest carriers, economic deregulation through the Staggers Rail Act, and the return of Conrail to the private sector, among many misalignments in the track structure along the way.

Profitability is a critical element of success, particularly for an industry that is both capital and labor intensive and needs to generate its capital from operations. But corporate responsibility requires consideration of employees, customers, and affected communities, as well as investors.

The first obligation of the railroad is to operate safely, and as a former safety enforcement attorney and regulator I'm delighted that we have seen immense progress over the last several decades. However, this testimony addresses an area in which major railroads have regressed and need to do a better job.

What is the problem? Perhaps, the simplest way of explaining this is first to call out the types of accidents under discussion. In broad summary, they are events involving one or more of the following:

- Trains that are poorly marshalled because of the improper placement of blocks of loaded cars, empty cars, long and short cars, or cars presenting special problems (mostly cars with end of train cushioning devices).
- Trains that lack adequate means of control because of the locomotives assigned and their placement in the train.
- Trains for which the train air brake line is too long (between assigned locomotives) to function as intended.
- Trains marshalled with the expectation that locomotives distributed within the train will remain in communication with the controlling locomotive in the front but without sufficient means of relaying electronic commands. (This can happen because communications are blocked by terrain and other local conditions or simply because the train is too long.)
- Trains required by management to be controlled by energy saving on-board systems, when the systems are not adequate to the job given train make-up or route conditions.

These types of problems arise much more frequently under PSR operations because this type of operating plan calls for—

- Power assigned to each train to be minimally adequate
- Pre-blocking to destination of rail cars regardless of the impact on train make-up of large blocks picked up along the route of travel
- Aggregation of car types that formerly would be in trains of uniform profile (intermodal trains, unit trains) into very long and heavy manifest trains, and
- Minimum staffing in yards and terminals, and reduced numbers of crews handling local switching. This results in the requirement for road crews to handle over-the-road challenges and also perform local switching involving drafts of cars much longer and heavier than previously would have been the case.

So, how are they doing with this traditional mix of potential problems and brand-new problematic practices? The cleanest way to look at this is to examine Class 1 railroad train accident performance. Since the late 1970s, Class 1 railroads have gotten better and better, decade after decade, until the current period. For now, however, they have hit a plateau:

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[1] Safe Placement of Train Cars: Report to the Senate Committee on Commerce, Science and Transportation and the House Committee on Transportation and Infrastructure (FRA June 2005).

[2] Train Energy and Dynamics Simulator

[3] Train Operations and Energy Simulator

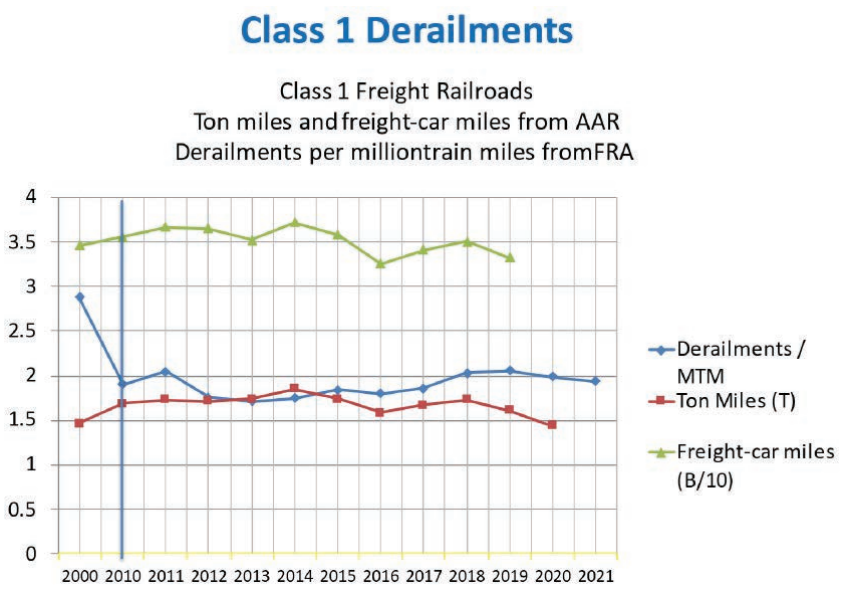

Figure 1—Class 1 railroads, rate for all derailments (yard, siding, main line, etc.)

Figure 1 focuses on derailments, for all causes and on all types of tracks. There is a point of potential contention here because we use the rate "per million train miles." This rate has traditionally been used as the appropriate measure of safety by the industry and FRA. It is fair to say that with fewer trains the *rate* might rise. But it is not as easy to say what another normalizing statistic should be. As the graph shows, Class 1 railroads are hardly knocking it out of the park when it comes to freight car miles or ton-miles of transportation service. The markets railroads serve are growing much faster than railroad car loadings or intermodal units transported (but that is for another testimony). To be fair, the decline of coal as a fuel has also cut drastically into ton miles.

If we stick with Class 1 railroads and consider only the raw counts, and only for *main line* derailments, Figure 2 shows what the picture looks like:

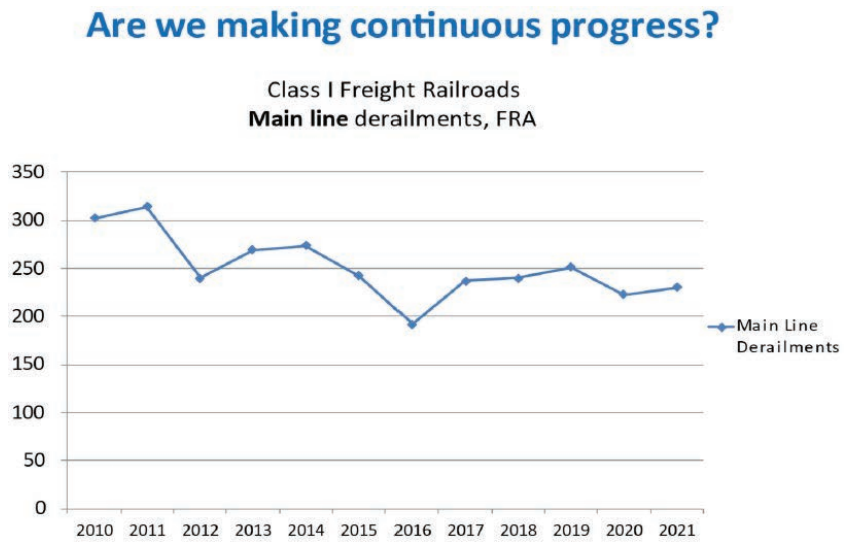

Figure 2—Derailments, main line only (Class 1)

Figure 2 illustrates the lack of progress in derailment prevention during the PSR era, which began among the major railroads in the United States in mid-decade. But how can this be? Aren't we making big progress in automated track inspections, more frequent internal rail flaw testing, better wayside detectors and much improved use of the data from these systems? In general, we would say "yes." Figure 3 provides some insight:

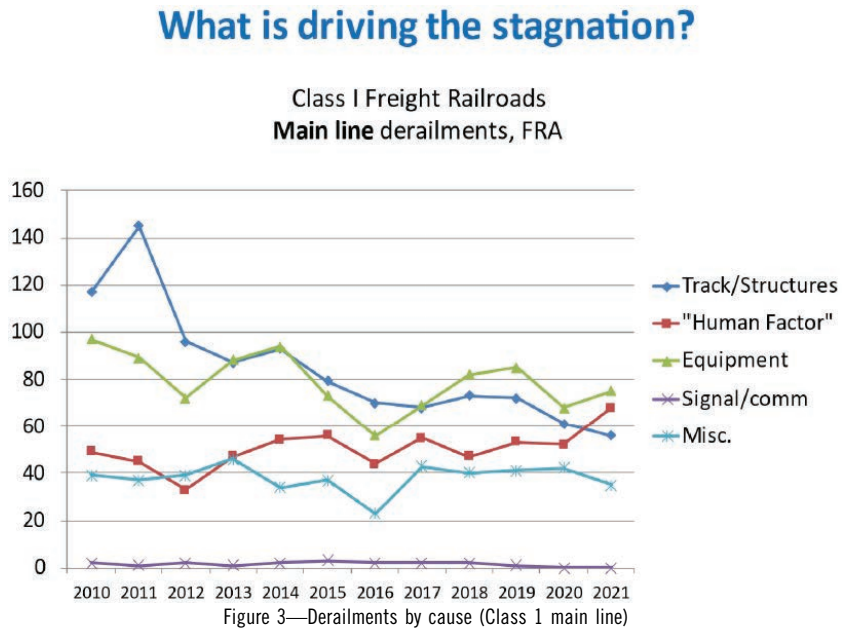

Figure 3—Derailments by cause (Class 1 main line)

FRA accident reporting breaks up the various "cause codes" into "buckets," and historically track/structure causes were most numerous. Note the steady decline in derailments related to track and structures. However, these declines have been off-

set by a steady rise in so-called "human factor" accidents and the persistence of equipment-caused accidents. The latter is surprising, given the widespread deployment of wheel temperature and bearing detectors, flat wheel detectors, and other technology (and the advent of "big data" used to trend individual cars in service to permit early intervention).

How, then, does this relate to management of in-train forces? Based on Federal accident investigations and my own review of the data, derailments caused by poor management of in-train forces are being reported primarily under "human factor" codes. This categorization fits the reporting system, which was established with heavy industry input and is managed by FRA.

However, it is important to know the "human factors" include organizational failures (e.g., train make-up, pushing technology farther than it is ready to go) as well as individual mistakes. Further, even events reported as individual mistakes may grow out of organizational failures (e.g., dispatching a train that has little chance of making it safely over the railroad). My own assessment, after review of multiple years of raw train accident records, is that organizational factors (management decisions related to PSR) are behind this lackluster performance.

From the review, it is also evident that mechanical (equipment) codes get applied to derailments caused by improper management of in-train forces, sometimes questionably (e.g., when a coupler fails without prior crack) and sometimes because the equipment code is the only one available (e.g., when communication fails among locomotives in the very long train).

Miscellaneous codes appear in the relevant data, as well, including my personal favorite, "M599—Other miscellaneous causes." That code was applied to a derailment that was determined both by FRA and by the railroad's own modeling to have been caused by train make-up. But the cause code was never updated. (This is only one of many errors evident in the filed accident reports.)

What can we do about it right now? Preventing each and every accident involving management of in-train forces is not a goal within our grasp given present technology and knowledge. However, the industry can do much better today from the point of view of safety, and provide much better service to its customers by using common sense. The industry should—

- Utilize the knowledge and experience that has been reduced to train make-up rules on every railroad. Follow your own rules, and update them promptly.
- Don't rely on technology that is not ready (e.g., using automated operations in territory where expertise and air brakes are required) or that is not properly deployed (e.g., without supplementary communications to close gaps).
- Don't ask employees to do the impossible. If you have to put multiple locomotives both in the middle of the train and in the rear, and the train has to traverse undulating terrain with air brakes used to avoid run-in or arrest movement down a grade, think twice. Would you want to try to manage that train?

Very clearly, major railroads are not prepared to do this on their own, so the Congress and FRA need to impose some discipline through an appropriately flexible regulatory structure.

How can we mold a better future? For the longer term, railroads express ambitions to automate their operations more fully. They are not even close to being able to do that. However, with or without automation, they would be much better positioned for the future with electronically controlled pneumatic brakes (ECP brakes).

The industry declares its love for technology, but two-way end-of-train devices took Congressional action. Positive Train Control came to fruition 35 years after its conception only because of a statutory mandate. Both technologies were implemented under rules I helped to write.

Our usual attitude as believers in market forces is that management will do what makes sense, and it doesn't need government to tell them. Very often, happily, that is the case. However, when it comes to major transitions that will cost a good amount of capital up front but will not fully pay off during the tenure of the senior management then in charge, the matter will often be deferred. If the investment itself is not the major issue, often the fear of failure in implementation is.

ECP brakes has now been deferred since the 1990's, despite FRA's efforts to support and incentivize implementation. The result has been that run-away accidents have not ended and management of in-train forces has been made increasingly difficult. It's time for ECP brakes.

Why should we care? The price for not moving forward on management of in-train forces will be more derailments, more releases of hazardous materials, more communities impacted, more disruptions to shippers' supply chains, and more employees confronted with dangerous working conditions on trains, on the ground, and during wreck clearance. Very fortunately, most derailments are not catastrophic events; but the more we treat them casually the more likely it is that we will have a catas-

trophe. And the failure to treat railroad braking systems as safety-critical will lead to further run-away accidents that will claim lives as well as property.

Mr. Chairman, one of the reasons little has been done about management of in-train forces, apart from the traditional focus on power brake safety, is that the subject is dense and complicated. The problem is one of interfacing systems, rapid technological change, the variety of operating environments and operating plans, and the need for human-centered engineering. The whole field is further complicated by the realities of railroad interline service and joint operations, meaning no single railroad can address it all alone.

I have provided the Committee with my *White Paper* on Management of In-Train Forces (v3.0, June 2022), which explores the related issues and attempts to frame appropriate questions and proposals, in some depth. It even discusses the potential of ECP brakes to prevent or mitigate some highway-rail grade crossing accidents and similar obstruction events. I would appreciate its being made a part of the record.

My hope is that Congress will charge FRA with developing flexible regulations governing the management of in-train forces and direct FRA to proceed with regulatory action requiring the phased implementation of ECP brakes. If I can be helpful to members or staff going forward, I would be happy to do so *pro bono publico*.

Thank you for the opportunity to address this important issue. I would welcome the opportunity to respond to any questions.

ATTACHMENT

[The 110-page white paper entitled, "Management of In-Train Forces: Challenges and Directions" by Grady C. Cothen, Jr. is retained in committee files and is available online at https://docs.house.gov/meetings/PW/PW14/20220614/114882/HHRG-117-PW14-Wstate-CothenG-20220614-SD001.pdf]

Mr. PAYNE. Thank you, sir.

Now we will have Mr. Bachman for 5 minutes.

Mr. BACHMAN. Good morning, Chairman Payne, Ranking Member Crawford, and members of this esteemed subcommittee. My name is Nate Bachman, and I am the vice president of sales and business development at Loram Technologies, Inc., LTI. Based out of Georgetown, Texas, we are a division of Loram Maintenance of Way.

In addition, I serve on the Executive Committee as the secretary/treasurer of Railway Engineering-Maintenance Suppliers Association, REMSA, a national trade association that represents companies that manufacture rail maintenance-of-way equipment and provide related services. I am honored to join this distinguished panel today and to provide our perspective on the important topic of freight rail safety.

I will first begin by commending Congress for the passing of the Infrastructure Investment and Jobs Act. The IIJA provides visionary and unprecedented levels of funding for key rail safety programs.

While Loram Technologies is just one business within REMSA, the rail supply segment of the industry has a significant economic fingerprint. Railway suppliers directly employ more than 125,000 people in manufacturing, repair, maintenance, and leasing, among others.

In addition to my role on the REMSA board, LTI is also a proud and active member of the National Railroad Construction and Maintenance Association, or NRC, and the Association of American Railroads. Both at LTI specifically and in the entire rail supply and contracting industry, safety is our number one priority. We work as a company and industry to continually improve safety performance.

In our experience, the most successful work environment is one where technology, such as automated track inspection, can complement the work on the ground to both augment and improve safety for workers and railroads. That is precisely what this technology does today.

To be clear, the intent of this technology is not to replace workers. Before LTI and other companies developed these solutions, track inspections were both labor and time intensive. This technology can detect tiny defects invisible to the human eye while enabling railroads to inspect up to eight times as much track in a given day.

By targeting visual inspections through the use of data-driven technology, we can reduce redundant manual inspections, which both enhances greater roadway worker safety and allows for an approach whereby track workers' inspection time can be dedicated to, and prioritized around, the most pressing track defects.

Loram Technologies utilizes proprietary state-of-the-art imaging technology which scans the track to reveal the exact condition of every railroad tie and the associated components along the way. It pinpoints any potential problems and marks their exact location so that the railroad can target and repair them in an efficient manner. This technology finds flaws manual detection methods may miss, and it does so while traveling at speeds up to 25 miles per hour.

According to the FRA, track-related issues caused one-quarter to one-third of all train accidents from 2001 to 2020. The use of automated track inspection technologies paired with visual inspections has helped to drive down this number considerably.

We encourage Congress and the FRA to work collaboratively to promote rail technologies that enhance safety in the industry. We believe that the waivers that the Class I railroads have requested for continuing their ATI pilot programs puts safety first and should be continued.

More data from continued pilots benefits rail workers, rail suppliers, railroads, the FRA, and the general public. This combination of data-driven findings from ATI technology and the visual inspections made by workers on the ground should be a powerful force in moving the rail industry forward.

Thank you for the opportunity to share our perspective, and I am happy to answer any questions.

[Mr. Bachman's prepared statement follows:]

Prepared Statement of Nathan C. Bachman, Vice President of Sales and Business Development, Loram Technologies, Inc.

INTRODUCTION

Good morning, Chairman Payne, Ranking Member Crawford, and Members of this esteemed subcommittee. My name is Nate Bachman and I am the Vice President of Sales and Business Development at Loram Technologies, Inc. (LTI). In addition, I serve on the Executive Committee as the Secretary/Treasurer of the Railway Engineering-Maintenance Suppliers Association (REMSA) a national trade association that represents companies that manufacture rail maintenance-of-way equipment and provide related services. I am honored to join this distinguished panel today and to provide our perspective on the important topic of freight rail safety.

Loram Technologies

Let me first begin by commending Congress for passing the Infrastructure Investment and Jobs Act (IIJA). The IIJA provides visionary and unprecedented levels of funding for key rail safety programs. The Consolidated Rail Infrastructure and Safety Improvements (CRISI) grant program, in particular, is a vital source of funding for the industry to address key safety improvement projects.

Now for some background on Loram Technologies, Inc. Based out of Georgetown, Texas, LTI creates innovative solutions to help the railroad industry. From our GateSync and Solaris ballast delivery systems to the Aurora® track inspection system; our products stand out among the rest as technologically advanced, safer, more efficient and more productive than traditional methods of getting things done. We work with customers across the globe to deliver custom solutions designed around their specific needs.

LTI is part of the Loram Corporation (Loram) based out of Hamel, Minnesota. Loram employs more than 1,400 people with the majority of those being heavy equipment operators and maintainers working on railway lines across North America. The company has manufacturing facilities and corporate offices in Minnesota, Illinois and Texas. It has always been the company's objective to deliver safe, advanced, and efficient solutions to the railroad industry.

REMSA and the Rail Supply Industry

While Loram Technologies is just one business within REMSA, the rail supply segment of the industry has a significant economic footprint. Beyond their critical support for a railroad system comprising more than 1.6 million railcars, 38,000 locomotives, and 140,000 miles of track, the railway supply industry is also essential to the national economy: generating value, stimulating jobs, and paying taxes. The economic contribution of the railway supply industry in 2017 amounted to more than $74.2 billion in gross domestic product (GDP) and they paid $16.9 billion in taxes to local, state and federal governments. Railway suppliers directly employ more than 125,000 people in manufacturing, repair, maintenance, and leasing, among others.[1]

As I mentioned in my opening, I serve as an officer for REMSA. REMSA represents nearly 250 companies in the maintenance-of-way segment of the rail supply industry. Most REMSA member companies are small businesses with manufacturing facilities and offices located all across the United States.

REMSA was created in 1965 by the merger of the Association of Track and Structure Suppliers and the National Railway Appliances Association, two long-standing organizations in the railroad maintenance-of-way industry. The association represents companies and individuals who manufacture or sell maintenance-of-way equipment, products, and services, or are engineers, contractors and consultants working in construction and/or maintenance of railroad transportation facilities. REMSA members constitute a large part of the maintenance-of-way industry. The association sponsors Railway Interchange, the largest exhibit of maintenance-of-way equipment, products and services in the United States. REMSA members exhibit rail and track products, track maintenance equipment and services, safety devices and software that enables the railroad industry to work smarter.

In addition to my role on the REMSA Board, LTI is also a proud and active member of the National Railroad Construction and Maintenance Association (NRC) and the Association of American Railroads (AAR).

Finally, of note, REMSA and NRC collaborate on a grassroots program that brings Members of Congress out to our member company facilities so we can help educate Congress on the work that our members do and the impact they have on the community, rail safety, and the local economy.

Background on Railway Automated Track Inspection (ATI) Technology

We appreciate the opportunity to provide our insights on freight rail safety, and in particular, how the rise of technology has helped to contribute to increased safety in the freight rail industry. As one of several companies providing innovative rail inspection technologies that complement the hard-working men and women on the ground, LTI is well positioned to provide a brief overview of this technology.

Let me be clear, the intent of this technology is not to replace workers. In our experience the most successful work environment is one where technology, such as Automated Track Inspection (ATI), can complement the work on the ground to both augment and improve safety for workers and the railroads. That is precisely what

[1] *Tracking the Power of Rail Supply: The Economic Impact of Railway Suppliers in the U.S.* September 2018. https://www.remsa.org//Files/Rail__Supplier__EIS__2018.pdf

this technology does today. Both Congress and the FRA should strive to enact policies that foster this critical relationship.

Both at LTI and in the entire rail supply and contracting industry, safety is our number one priority. We work as a company and industry to continually improve safety performance. LTI is an active member of the NRC Safety Committee and through this work we have participated in numerous FRA Rail Safety Advisory Committee (RSAC) working groups related to track safety standards and rail integrity regulations.

Though FRA data trends indicate that over the past 20 years the freight rail industry is getting safer, we must always endeavor to work together towards producing an even safer industry. Core to this objective is taking the railway methods of the past and utilizing the technologies of today to usher in the next century of railroading. Until as an industry we are able to do this more effectively, progress in the rail industry will be hindered.

Before LTI and other companies developed this technology, track inspections were both labor and time intensive. This new technology can detect tiny defects invisible to the human eye, while enabling railroads to inspect up to eight times as much track each day. By targeting visual inspections by using data-driven technology, we can reduce redundant manual inspections which both enhances greater roadway worker safety and allows for an approach whereby track workers' inspection time can be dedicated to and prioritized around the most pressing track defects.

As a provider of these systems, we have seen firsthand how this technology can uncover track flaws and ballast deficiencies. In addition to track flaws, LTI also uses proprietary state-of-the-art imaging technology, which scans the tracks to reveal the exact condition of every tie and the associated components along the way. It pinpoints any potential problems and marks their exact location so that the railroad can target and repair them in an efficient manner. This technology finds flaws manual detection methods may miss, and it does so while traveling at speeds averaging 25 mph.

LTI collects approximately 40,000 track miles of data annually. With these collections, customers are able to evaluate tie and ballast conditions. This data is used for both urgent track repairs as well as maintenance planning in successive years. By utilizing technologically advanced vision systems, we have been able to collect and catalog data on hundreds of thousands of miles of track. This information has been effectively utilized to help railroads focus their people and dollars to most pressing maintenance needs.

According to the FRA, track-related issues caused one-quarter to one-third of all train accidents from 2001 to 2020. The use of automated track inspection technologies, in addition to visual inspections, has helped drive down the number of track-caused derailments.[2] Additionally, per a letter that 23 U.S. Senators sent to then FRA Deputy Administrator Amit Bose on October 29, 2021, the "results of the ATI programs have overwhelmingly proven the safety benefits of the concept. In some cases, the ATI tests have resulted in an over 90 percent reduction in unprotected main track defects per 100 miles tested."[3]

Pair this with our own observations on the ground and the data from the Class I railroads' ATI pilot programs, this technology clearly detects track geometry defects with increased accuracy.

RECOMMENDATIONS

It is clear that through both our own experience as a leading supplier of automated inspection technology and the data acquired through the Class I railroad test programs that the ATI waivers have yielded positive safety results. Moreover, as we have seen, the development of automated inspection technologies is crucial to enhancing safety by reducing the number of track-related and caused derailments.

To that end, we encourage Congress and the FRA to work collaboratively to promote rail technologies that enhance safety in the industry. We believe that the waivers that the Class I railroads have requested for continuing their ATI pilot programs put safety first and should be continued. More data from continued pilots benefits rail workers, rail suppliers, railroads, the FRA and the general public.

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[2] *Report to Congress: Automatic Track Geometry Measurement System Technology Test Programs*. Federal Railroad Administration. November 23, 2021. https://railroads.dot.gov/sites/fra.dot.gov/files/2021-11/FRA%20Report%20to%20Congress-Track%20Inspection%20Test%20Program%2011.23.21.pdf

[3] *Senate letter to FRA Deputy Administrator Amit Bose*. October 29, 2021. https://reason.org/wp-content/uploads/Letter-from-Senators-to-Amit-Bose.pdf

This combination of data-driven findings from ATI technology and the visual inspections made by workers on the ground should be a powerful force in moving the rail industry forward. Congress and the FRA should carefully consider how to further promote the acceptance of this technology in the near future, and should also embrace any new future technology that will enhance safety in the rail industry.

CLOSING

Thank you for the opportunity to share our perspective on freight rail safety. I look forward to answering any questions you may have.

Mr. PAYNE. Thank you, sir.

Next we will hear from Ms. Sanborn.

Ms. SANBORN. Mr. Chairman, Mr. Ranking Member, and distinguished members of the subcommittee, thank you for the opportunity to be here today.

Norfolk Southern and the approximately 630 other freight railroads operating in the United States form an integrated system that provides the world's safest, most productive, and lowest cost freight rail service. The U.S. freight railroad industry is an irreplaceable national asset that enhances our Nation's standard of living and its competitiveness in the tough global economy.

The U.S. rail system owes its success to a lot of different factors, but in my opinion, a key ingredient is our dedicated workforce. Railroading is a tough, demanding job. The men and women of Norfolk Southern put their boots on every day and work hard to safely and efficiently serve our customers. It is no exaggeration to say that the railroad couldn't operate without them, and I am grateful that they have chosen to pursue a career in this important industry.

In railroading, the relentless pursuit of safe operations is not optional; it is a business imperative. We have an obligation to operate safely for the benefit of our employees, our customers, and the communities where we operate. And, while we have not yet reached our ultimate goal of zero accidents and injuries, we are making significant progress. The overall train accident rate, the employee injury rate, and grade crossing collision rate have all fallen substantially since the year 2000.

Railroads today have lower employee injury rates than most other major industries, including trucking, airlines, agriculture, mining, manufacturing, and construction, even lower than grocery stores. These results are driven by the industry's sustained investment in its infrastructure, the development of safety technologies, and the modernization of operating and maintenance practices.

But the most important factor in achieving continuous safety improvement is the creation of a company culture that promotes safety through behavioral changes. Railroads work very hard to train their employees and instill in them a high level of safety awareness in everything they do. We are among the Nation's most frequent recruiters of veterans, whose discipline and training are a good fit within a high-performing safety culture.

The Federal Government can also have significant impact on the freight transportation sector's ability to achieve positive safety outcomes. It is essential that, when the Government enacts laws or regulation, it keeps in mind the impact on safety of the Nation's entire transportation system. Taking an evidence-based, holistic

view of the whole transportation ecosystem is vitally important to creating national safe transportation policy that works for all stakeholders and delivers continuous improvements in safety.

Regulation of crew size is a subject where I think the Federal Government would benefit from taking this approach. Legislation regulations have been considered that would mandate that all Class I freight trains must operate with two employees in the locomotive cab, yet there is no evidence that trains with one-person crews have accidents at a higher rate than trains with two-person crews.

While it wouldn't enhance safety, there is one thing a crew-size regulation would accomplish: It would make railroading less competitive against other modes of transportation who do not face similar operational restrictions. Imposing a minimum crew-size mandate on railroads would undermine the policy goals of promoting safer, more environmentally sustainable freight transportation.

The Federal Government also has an important role to play in encouraging or at least not discouraging the development of safety-enhancing technology. One recent technological innovation with demonstrated safety benefits is automated track inspection technology.

In cooperation with FRA, we developed a test to find the optimum mix of automated and manual track inspections. On every single metric tested, the automated system increased track safety and quality, even as the frequency of manual inspections was reduced. This system was able to detect defects that were imperceptible under visual inspection, while human inspectors were able to concentrate on making track repairs and finding defects in switches, crossing diamonds, and other areas that the automated system could not evaluate.

Despite these impressive results, the FRA recently denied our request for a waiver that would have allowed the same combination of automated and manual inspections everywhere on the Norfolk Southern system.

At NS, our goal is to provide a customer experience that is safe, efficient, and as cost-effective as possible, but this can't happen without technology. We are concerned that FRA is not doing everything it can to support the development of technologies, such as automated track inspection systems, that have actually been shown to work. We respectfully urge policymakers at all levels to be proactive, collaborative partners with railroads to meet our ultimate goal of zero accidents and injuries.

Thank you again for the opportunity to testify today, and I will be glad to take your questions.

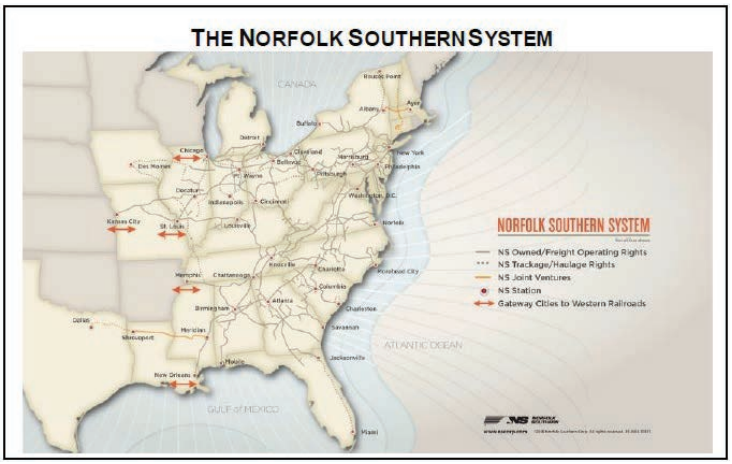
[Ms. Sanborn's prepared statement follows:]

Prepared Statement of Cynthia M. Sanborn, Executive Vice President and Chief Operating Officer, Norfolk Southern Corporation, and Chair, Safety and Operations Management Committee, Association of American Railroads

Thank you for the opportunity to be here today. I am Cindy Sanborn, Executive Vice President and Chief Operating Officer of Norfolk Southern Corporation, the parent company of Norfolk Southern Railway Company. My career in the rail industry has spanned over 30 years and has included service for three Class I railroads.

I was certified as a locomotive engineer for 26 years. While I am testifying today on behalf of Norfolk Southern (NS), most of what I have to say is applicable to other U.S. freight railroads as well.

Norfolk Southern's beginnings date back to the earliest days of railroading nearly 200 years ago. Today, NS operates approximately 19,300 route miles in 22 states and the District of Columbia. We serve more than 400 general warehouses and distribution centers; more than 200 lumber and paper facilities; some 120 steel-related facilities; 116 active coal loading facilities; 78 power plants; and more than 60 auto-related facilities. We have more than 50 intermodal terminals and serve every major port on the East Coast between New York City and Jacksonville, as well as several Great Lakes ports and numerous river ports. Through connections with our transportation partners, we deliver products to consumers in every state and throughout the world.



Together, NS and the approximately 630 other freight railroads operating in the United States form an integrated, nearly 140,000-mile system that provides the world's safest, most productive, and lowest-cost freight rail service. The U.S. freight railroad industry is the envy of the world. It is an irreplaceable national asset that enhances our nation's standard of living and its competitiveness in the tough global economy.

The U.S. rail system owes it success to a lot of different factors, but in my opinion the key ingredient is our dedicated workforce. Railroading is a tough, demanding job, and not everyone is cut out for it. The men and women of Norfolk Southern put their boots on every day and work hard to provide a safe, efficient, and reliable service product for our customers. It's no exaggeration to say the railroad couldn't operate without them, and I am grateful that they have chosen to pursue a career in this important industry.

Throughout my testimony, I will discuss a series of broad principles that should govern the relationship between railroads and rail safety regulators. Following that, I will briefly examine several specific topics related to safety that are particularly germane today.

SAFE AND WORKING HARD EVERY DAY TO GET EVEN SAFER

For Norfolk Southern—and I'm sure I can speak for all railroads here too—pursuing safe operations is not optional; it's a business imperative. We have an obligation to operate safely for the benefit of our employees, our customers, and the communities where we operate.

While we have not yet reached our ultimate goal of zero accidents and injuries, we are encouraged by the progress we have made. Data from the Federal Railroad Administration (FRA) indicates that, for the rail industry as a whole, the overall train accident rate in 2021 decreased 32 percent from 2000; the employee injury rate fell 48 percent; and the grade crossing collision rate was down 23 percent. Railroads today have lower employee injury rates than most other major industries, including trucking, airlines, agriculture, mining, manufacturing, and construction—even lower than grocery stores. Safety extends to hazardous materials too; well over

99.99% of rail hazmat shipments reach their destination without a release caused by a train accident. These are tremendous safety success stories, driven by the industry's sustained investment in its infrastructure, the development and advancement of safety technologies, and the modernization of operating and maintenance practices.

Railroad Accident Rates:
2000–2021

Total accidents	–32%
Collisions	–50%
Derailments	–35%
Other	–13%
Employee injuries	–48%
Grade crossings	–23%
Hazmat incidents †	–60%

† Through 2020
Source: FRA, AAR

But the most important factor in achieving continuous safety improvement is the creation of a company culture that promotes safety through continuous education and reinforcement of safe behaviors. This is why railroads work very hard to train their employees and instill in them a high level of safety awareness in everything they do. Railroads work diligently to identify new technologies, operational enhancements, training, and other ways to further improve their safety record.

We recognize that the federal government can also have a significant impact on the freight transportation sector's ability to achieve positive safety outcomes. Therefore, it is essential that, when Congress enacts laws or federal agencies promulgate regulations, they not be driven by parochial concerns or persuaded by the use of anecdotes that provide an incomplete, and often inaccurate, picture of the rail safety environment. And it is equally important that when federal officials regulate the rail industry that they not lose sight of the impact laws and regulations focused on railroads have on the safety of the nation's entire transportation system. Laws and regulations, however well intended, that place operational burdens on railroads can distort competition within the freight transportation sector and divert freight from the much safer rail system to other far more dangerous modes of transportation. We urge all federal officials—not just safety regulators—to take these impacts into account when they craft rail regulatory policy. Taking an evidence-based, holistic view of the nation's entire transportation ecosystem is vitally important to creating a national transportation policy that works for all stakeholders and delivers continuous improvements in safety.

TECHNOLOGY AND PROCESS STREAMLINING

New technologies are changing transportation. For example, widespread efforts are underway today—including extensive research subsidized by taxpayers—to develop autonomous motor vehicles, including autonomous trucks that would compete directly with railroads. Autonomous vehicle technologies and other technologies impacting transportation vary in their stages of development, but these are challenges railroads must be ready to confront and compete with once commercially viable.

As such, railroads will continue to work diligently to identify and implement new technologies to make their operations more efficient while also achieving safety outcomes that are at least as good as what we are achieving today. However, the efforts of NS and other railroads to harness the power of technology and drive innovation will not be as effective as they could be if legislative and regulatory processes and requirements fail to keep pace or are not well grounded in evidence-based, scientific understanding.

Regulatory reform can, and should, be a key part of any federal effort to improve rail safety. Railroads respectfully suggest that the FRA and other agencies with regulatory authority over railroads should become more forward-looking in how they propose and promulgate new rules and in their approach to new safety technologies. More specifically, these agencies should:

- Carefully identify and describe beforehand the specific concern that a particular new rule is meant to address and ensure that the new rule actually would address the concern efficiently and effectively. Meaningful dialogue with railroads and other interested parties is essential in this effort.

- Use current data and sound science to establish the need for a new rule and to validate that the benefits of a new rule exceed its costs. Assess the impact of any rule on the competitiveness of the freight railroad industry and any likely freight diversions to less safe modes of transportation.
- When proposing rules, also propose metrics by which the rules' effectiveness in achieving their stated objectives can be judged. Regularly review final rules to determine if they are still meeting those objectives.
- Issue emergency orders only after finding a high risk of imminent harm. Emergency orders should be narrowly tailored and expire automatically after the unusual risk has passed or has been adequately addressed.
- Regulation of technologies should occur at the federal level to avoid a patchwork of state and local rules that would create confusion, inhibit the deployment of new innovations, and undercut the efficient functioning of the national rail network.
- Adopt performance-based, rather than prescriptive, regulations. Take care not to "lock in" existing technologies and processes so that new innovations and new technologies that could improve safety and efficiency are not stifled. Performance-based standards would give industry discretion to innovate, while still being subject to effective agency oversight and continuing to ensure the safety of rail employees, customers, and the public-at-large.

This last point, regarding technologies, is especially pertinent. Railroads have long applied technological solutions to improve safety, enhance performance, and create efficiencies—e.g., inspection cars that use sophisticated electronic and optical instruments to inspect track alignment, gauge, and curvature; ground-penetrating radar and terrain conductivity sensors to identify problems below the ground (such as excessive water penetration and deteriorated ballast) that hinder track stability; and highly advanced vehicles that detect internal flaws in rails; and drones to inspect the underside of bridges.

Railroads will continue to develop and implement new technologies to improve infrastructure safety and performance, but achieving maximum safety benefits will require regulatory flexibility that does not hinder innovation, allows railroads to find what works best, and encourages railroads to keep investing in those technologies.

TRACK INSPECTION

Today, new railroad technologies must often be utilized in addition to existing regulatory compliance practices and procedures—some of which have been in place for decades and have long since been made obsolete. This means, unfortunately, that the benefits of technological advances are often marginalized for purposes of regulatory compliance.

Track inspections are a case in point. Since the advent of railroading, track defects have been a cause of train accidents, especially derailments. Historically, track inspections have been conducted visually by track inspectors using hand-held measuring tools. These manual inspections are conducted either on foot, or, more often today, in railroad "hi-rail" vehicles.[1] Based on a rule published in 1971—more than 50 years ago—the FRA prescribes how often track must be inspected in this manner.

In recent years, though, automated track inspection (ATI) has dramatically changed the nature of track inspection. ATI systems use technology (*e.g.*, lasers and cameras) to measure and identify railroad track defects. ATI systems are mounted on freight cars or locomotives[2] that inspect track during their day-to-day operations. These systems collect and analyze track information while trains are operating at normal speed and pulling freight across the network. Additionally, a measurement showing how track structure is actually performing under the load of a train is more valuable from a safety perspective than a static measurement taken during a visual inspection from a hi-rail vehicle.

With ATI, inspection data are sent wirelessly in real time to an inspection office where track engineers verify the data and arrange for needed repairs. If necessary, maintenance personnel are dispatched to visually inspect track identified as potentially having a defect. ATI systems allow track inspections at frequencies and levels of detail that are not possible under standard visual inspection techniques. Put another way, ATI detects track defects with far more accuracy, consistency, and frequency than do manual visual inspections. ATI also results in the collection of huge

[1] A hi-rail vehicle is a specially designed vehicle that can operate on roadways and rail tracks and is outfitted with track inspection technologies.

[2] NS is pleased to be the first North American freight railroad to develop and deploy an ATI system mounted on a locomotive.

amounts of track inspection data, allowing railroads to better understand and evaluate the safety of their infrastructure and to develop improved preventative maintenance. In other words, capital resources are better directed to ensure track repairs are most accurately planned. The enormous advantages of ATI explain why railroads have voluntarily invested significant resources to develop and implement these systems. The FRA itself has also expended millions of dollars annually to develop and use this technology to improve track safety.

ATI inspections reduce (but do not eliminate) the need for visual inspections. In fact, they help to make visual inspections more effective by directing track inspectors to focus on areas that need greater attention. ATI also lower employee risk exposure, as there is a decreased need for inspectors to physically occupy track solely to fulfill obsolete manual inspection requirements. Moreover, greater use of ATI would increase rail network capacity and supply chain benefits because existing track inspection procedures require railroads to devote scarce capacity to visual inspections—capacity that could otherwise be devoted to moving freight. Better track safety that results in fewer track-caused accidents would also reduce supply chain impacts that occur due to accidents and the subsequent time-consuming, resource-intensive accident clean-up and repair efforts that flow from them.

In recent years, the FRA gave several railroads, including NS, permission to test ATI systems on portions of their networks in conjunction with a reduced level of traditional visual inspections. The results of these test programs were impressive. NS's experience is illustrative. We call our ATI system an "automated track geometry measurement system," or ATGMS. We conducted our test program in our Blue Ridge Division, where the wide variety of climatological, topological, and operational features render it representative of our rail system as a whole.

On every single metric tested, ATGMS increased track safety and quality, even as the frequency of manual inspections was reduced. ATGMS was able to detect defects that were imperceptible under visual inspection, while human inspectors were able to concentrate on making track repairs and finding defects in switches, crossing diamonds, and other areas that ATGMS could not evaluate.

Because our data clearly demonstrated that ATGMS was safer than legacy methods, in March 2021, we petitioned the FRA for a permanent waiver that would allow us to reduce manual inspection for all lines on which we had implemented ATGMS. However, in March of this year, FRA denied that request. With all due respect to the FRA, its denial in our case was contrary to the evidence. The FRA did not explain how granting our waiver request could possibly endanger rail safety or the public interest. It did not explain how granting a waiver could "short-circuit" the existing Railroad Safety Advisory Committee's (RSAC) consideration of ATI technology.[3] Indeed, even as the FRA described the test program as "successful," it ignored the key finding—that systemwide implementation of ATGMS would improve rail and worker safety.

On the same day that it denied our request for a waiver, the FRA denied a similar request from BNSF Railway. In BNSF's case, the FRA denied BNSF the ability to expand a pre-existing waiver to new territories even though the data BNSF had already developed under that waiver conclusively showed that doing so would improve safety on those new territories. The FRA has previously announced that it will allow existing ATI test programs performed by other railroads to expire in November 2022, when their initial terms are up, despite their positive safety improvements. The FRA's actions are difficult to understand. The combination of enhanced track inspections with reduced visual inspections provides a far, far better system in terms of detecting track defects than the 50-year-old visual inspection regime. The FRA had encouraged the development and deployment of this technology for years until abruptly changing their approach. The FRA should go back to encouraging, not discouraging, technological advancements like these that advance safety.

The ATI example shows how a broader use of the FRA's waiver authority could be used to modify FRA regulatory directives in light of changed circumstances, without sacrificing appropriate regulatory oversight. Unfortunately, the timeline for granting even simple FRA waiver requests is typically measured in months or years, and waivers often come with conditions that largely negate their value. Congress should direct the FRA to make permanent those long-standing waivers whose value has been proven through successful test programs.

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[3] RSACs are formally chartered Federal Advisory Committees and typically include representatives from all the FRA's major stakeholder groups, including railroads, labor organizations, suppliers, and other interested parties. Their purpose is to provide a forum for collaborative rulemaking and program development. RSACs exist for many different topics, including ATI systems.

In addition, because short-term waivers from existing regulations do not give the rail industry sufficient confidence to invest in new technologies, regulatory barriers should be overcome in ways that are more enduring than waivers. For example, the FRA could issue waivers of indefinite duration and provide procedures for the expedited conversion of time-limited waivers to permanent waivers or final rules if equivalent or improved safety has been demonstrated.

BRAKE SYSTEMS

Railroads are deeply disappointed in the FRA's recent treatment of ATI technology, but are more pleased with recent actions regarding rail braking systems that will move safety forward.

FRA's final rule implementing miscellaneous amendments to its brake system safety standards was published in December 2020 and allows for railroads to modernize and make their operations more efficient while reducing safety risks to employees and the public. More specifically, the December 2020 rule modified FRA regulations governing train air brake inspections in part by codifying longstanding industry waivers, many of which were adopted during the Obama Administration, that allowed railroads to lengthen the number of miles a rail car could travel before the car's brake systems had to be tested. Safety data gathered under the waivers demonstrated conclusively that more advanced testing methods for automated single car air brake tests result in a significant decline in freight car brake failures compared to the older test method. The final rule also extends the time period between certain air brake inspections. These regulatory updates were appropriate due to the proliferation of technological improvements to air brake systems.

Meanwhile, in January 2021, the FRA issued a Notice of Proposed Rulemaking (NPRM) which proposes to allow railroads to replace antiquated paper records of rail car brake inspections with modernized electronic Air Brake Slip (eABS) recordkeeping systems. The eABS systems allow railroads to accurately and efficiently track inspections and mileage electronically on a freight car-by-freight car basis. The old regulations require trains to stop more often than necessary for inspections and limit trains' ability to drop off and pick up other railcars due to recordkeeping limitations that necessitate treatment of all the cars in a train as a single unit to be managed by a paper record.

An eABS system provides robust, constantly updated car-specific data. Coupled with railroads' use of modern preventative and predictive maintenance strategies, wayside detectors and machine vision stations,[4] modernized mechanical equipment components, and improved employee training programs, eABS systems permit far safer and more efficient train operations.

FATIGUE RISK MANAGEMENT

On December 22, 2020, the FRA published an NPRM that, if implemented, would require railroads to develop and implement Fatigue Risk Management Programs. The NPRM would require railroad fatigue plans to: (1) identify safety hazards associated with fatigue; (2) assess the risks associated with identified hazards; (3) prioritize risks for mitigation; (4) implement mitigation strategies for those risks; (5) track the effectiveness of mitigation strategies; and (6) revise fatigue plans after review of the effectiveness of such strategies. Fatigue plans would set specific fatigue-related safety goals and describe strategies for reaching those goals.

NS and other railroads want properly rested crews; it is not in a railroad's best interest to have employees who are too tired to perform their duties properly and safely. That's why railroads have long worked with their employees and others to find innovative, scientifically-based solutions to fatigue-related problems. Because factors that can result in fatigue are multiple, complex, and frequently intertwined, there is no single solution to fatigue. Railroads are concerned that as the NPRM process plays out, the FRA will attempt to expand the scope of this NPRM to encompass crew scheduling issues that are properly within the purview of collective bargaining between railroads and rail labor.

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[4] Machine vision is, in essence, an MRI for a rail car. As a train passes through a machine vision imaging area, lasers and cameras quickly provide a three-dimensional model of each piece of train equipment, identifying actual and potential defects. The model and images can be viewed remotely from anywhere, allowing these "in advance" inspections to be conducted rain or shine, day or night, from the comfort of a desk chair. They allow railroads' mechanical teams to know what repairs are needed before a train arrives in a rail yard. This improves safety, speeds the repair process, reduces the time trains have to spend in rail yards, reduces costly system delays, and improves reliability and customer service.

Many rail employees work set schedules. However, some rail employees, such as some train crews, work flexible schedules that vary based on a variety of factors, including business levels, the time of the year, and the day of the week. Weather conditions, track maintenance, accidents, an unexpected employee illness, and dozens of other factors can affect an employee's work schedule, thus impacting the time other crews will be needed. Moreover, in many cases, collective bargaining agreements allow rail employees, especially those with the most seniority, to largely determine for themselves when and how many hours they work (subject to limitations on the maximum number of hours a rail employee can work). These employees' actions, in turn, affect how many hours, and when, less senior employees work. This greatly complicates railroads' ability to schedule crew assignments.

Scheduling is a complicated issue with circumstances unique to each railroad. The FRA should refrain from interjecting itself into this matter and instead allow railroads to continue to address the issue as part of the collective bargaining process.

CREW SIZE

As members of this Committee are aware, legislation and regulations have been proposed that would mandate that all Class I freight trains must operate with a certified locomotive engineer and a certified conductor in the locomotive cab.

Existing FRA regulations do not mandate minimum crew staffing requirements. Some non-Class I railroads have long operated with just one person in the locomotive cab, and thousands of Amtrak and commuter passenger trains, carrying hundreds of thousands of passengers, operate every day with just one person in the locomotive cab. For Class I railroads, industry practice to date has been to have two-person crews for over-the-road mainline operations. On NS and other Class I railroads, the subject of crew size has typically been addressed as part of the collective bargaining process with rail labor, and railroads believe such matters should continue to be addressed in that venue.

The major reason offered by proponents of a two-person crew mandate is that it would enhance rail safety. Yet no one—not the FRA, not sponsors of the legislation in Congress, not rail labor—can point to hard data that support this contention. There is no evidence that trains with one-person crews have accidents at a higher rate than trains with two-person crews. The FRA itself, after its own review, stated in 2009 that it found no "factual evidence to support the prohibition against one-person operations."[5] The FRA again reviewed the data on this issue in 2019 and determined that "issuing any regulation requiring a minimum number of train crewmembers would not be justified because such a regulation is unnecessary for a railroad operation to be conducted safely at this time."[6]

While crew size mandates have never been supported by safety data, they make even less sense today with the implementation of positive train control technology (PTC), which has been installed and is operational on tens of thousands of miles of rail line throughout the country. PTC is a system of technologies designed to automatically stop a train before certain accidents caused by human error occur. PTC advances rail safety through the use of advanced technology, while at the same time further eliminating the need for "a second set of eyes" in locomotive cabs in certain circumstances. Neither NS nor other Class I railroads seek the ability to impose one-person crews unilaterally. Rather, we seek the flexibility to continue to work with rail labor under the existing collective bargaining framework to identify when the presence of PTC, or other technologies, allow a reduction in the number of crewmembers in a locomotive cab without jeopardizing rail safety.

VIRTUAL TRAINING

The pandemic has been an unspeakable tragedy on many levels, but one silver lining of it has been the development of reliable new video communications systems that allow individuals to attend meetings remotely. Virtual meeting technology has positive safety implications in that it allows, in this case, railroaders to more easily access training and other safety-related subjects than would be the case if everything had to be done in-person in a classroom. Railroads have developed virtual training modules for their employees—often with the exact same course materials and a live instructor present, just on a video screen rather than in a room together—but they are running into resistance from the FRA and rail labor on expanding their use. Virtual training can be an effective, efficient way to reach more

[5] FRA, *Denial of BLET Petition on RCO and Other Single-Person Operations*, Nov. 10, 2009
[6] FRA's May 28, 2019 Withdrawal of Notice of Proposed Rulemaking in Dkt. FRA–2014–0033.

employees more quickly, and railroads urge policymakers to facilitate its use, especially at a time when worker shortages are impacting rail service.

CONCLUSION

At NS, our goal is to provide a customer experience that is as safe, efficient, and cost effective as possible. I know other railroads share these goals. We are always willing to work cooperatively with you, other policymakers, our employees, our customers, and all other interested parties to advance our shared interests.

That can't happen without technology. Technology is the key to unlocking further reductions in rail-related accidents and fatalities of all kinds. While the rail industry is encouraged by the FRA's recently published research which confirmed longstanding railroad data that wayside detection systems are effective in the early identification of equipment that needs maintenance and improving operational safety, railroads remain concerned that the FRA is not doing everything it can to support the deployment of other safety technologies, such as ATI, that have actually been shown to work. We respectfully urge policymakers at all levels—on this Committee, at the FRA, and elsewhere—to be proactive, collaborative partners with railroads to meet our shared safety goals.

Mr. PAYNE. Thank you.

Now we will hear from Mr. Ferguson for 5 minutes.

Mr. FERGUSON. Good afternoon, Chairman Payne, Ranking Member Crawford, and members of the committee. Thank you for allowing me the opportunity to testify.

I took office in October of 2019. In my first 15 months as president, there were 12 rail transportation worker fatalities. In fact, at one point, within that period, the railroad suffered a fatality and at least one amputation every month for 9 months straight. Today, very little has changed for the better.

Undoubtedly, the railroads will have a message of an industry on the mend, but please rest assured that nothing can be further from the truth. For the last 10 years, the railroads have averaged eight fatalities per year. Last year, there were nine. And while there may be brief lulls of those types of events, the data reveals a steady, consistent, and frightening trend.

Currently, the rail carriers are hell bent on risking further injury to their employees, as well as the American public and supply chain infrastructure, by reducing or eliminating altogether the two crewmembers that control train movement in the cab of a locomotive. They will tell you that it is a matter of collective bargaining and that there is no data to support otherwise. I say to you, please do not be swayed.

Safety is not nor should it ever be negotiable. I assure you, accidents are occurring on short lines in yard jobs that operate with less than a two-person crew, but the rates and/or trends cannot be identified because the information is not captured. Similarly, all Class I's over-the-road railroad operations are performed with no less than a two-person crew today, so, there is no other data to compare. In other words, the railroads have no idea what will happen if they reduce crew size, but it is a gamble they are willing to take for the sake of satisfying their insatiable appetite of improving their company's bottom line.

What we do know from the data that we do have is that things are getting worse. A quick look at years 2020 through 2021 reveal an increase in total accidents and incidents from 8,792 to 9,192 and an increase in total employee injuries from 2,961 to 3,054. Make

no mistake, it is railroad greed that I believe has caused this committee to call us here today.

As you are aware, PSR was born from the pressure put forth by investors and shareholders on Wall Street. Since its advent, dramatic haphazard cuts have decimated railroad resources. Approximately 33 percent of the Class I workforce was laid off more than a year before the first case of COVID had ever been identified. Locomotives were put in storage, and integral crafts with special skills that were relied upon to perform safety-critical inspections were eliminated from terminals across the country.

Looking to the future, the trajectory for rail safety is alarming, especially if PSR continues with its status quo. Employees fortunate enough to have not been affected by the cuts are now voluntarily walking away from what was once the premier blue-collar job in the Nation. As a result, the institutional knowledge that carriers are letting walk out the door will threaten rail safety for another generation to come.

Exacerbating this issue is the railroad's panic-driven effort to stop the PR nightmare they are currently facing for their majority contribution to the supply chain crisis. Included in this panic is the slashing of training programs for new hires so that the railroads can portray an improving number of workers, when in reality all they are actually doing is providing the trainees with a deficient training program and a foundation built for failure. This is evidenced by multiple amputations and crushing injuries recently occurring to newly promoted conductors.

Notably, FRA accident report measurements do not reflect amputations. They are reported the same as most any other injury. This needs to change. Also, a specialized study of the dangers in switching operations is warranted by the NTSB. The NTSB has never performed one of those specialized studies on switching operations, and now is the time, as most fatalities and amputations have occurred in the performance of switching operations.

Compounding troubles in the rail industry is the fact that train lengths are growing and so are the number of major derailments, each one another step closer to the inevitability of the big one. Also increasing are the number of blocked crossings, the outcry from public commuters, and the stories of first responders not being able to get to their destinations while the victims, dependent upon their timely response, perished on the other side of the train.

Long trains are also making very difficult work for the crews. Radio communications are insufficient for the lengths of the trains. Conductors and engineers regularly lose the ability to communicate, often stranding them from a cry for help or a much needed train movement instruction to ensure the safest course. Long trains also expose our members to the elements for periods of time that would be unacceptable by OSHA and other industries but somehow are permissible in rail.

Mr. PAYNE. Please wrap up.

Mr. FERGUSON. In closing, I would like to say this: I am on record as having said that the railroad industry is going to end up like Boeing. It is not just the accidents that I am referring to; it is the lack of oversight and concern for the railroad's constant capitulation to outside pressures that are creating the biggest dan-

gers. I am not sounding the alarm here; I am screaming into the bullhorn for help. If left unchecked, it is my members who will end up maimed or killed, and it is America whose supply chain will end up collapsed.

Thank you, Mr. Chairman. I look forward to your questions.

[Mr. Ferguson's prepared statement follows:]

Prepared Statement of Jeremy Ferguson, President, Sheet Metal, Air, Rail, Transportation–Transportation Division

My name is Jeremy Ferguson, and I am the President of SMART Transportation Division, which is the largest railroad union in the United States—representing almost 40,000 freight railroad employees. Our members work in the operating crafts of certified conductor, certified locomotive engineer, yardmaster, yard foreman, switchman, utility employee, trainman, and many others. It is with absolute pride and honor that I present these remarks on their behalf.

Throughout history, freight railroading has been an inherently dangerous industry. In fact, since its beginning, countless men and women have lost their lives, suffered amputations and/or endured other life-altering injuries—not much has changed today. Sure, the overall numbers may be less, but so are the number of employees. The rates of fatalities are little unchanged, the amputations are still occurring, and workers are still becoming disabled with frightening regularity.

A cry for rail safety has never been more needed or more appropriate.

In the field amongst the rail workers, a common safety mantra is heard when referring to injuries and fatalities: *one is too many*. Last year it was nine (9). Nine rail workers perished while performing the daily tasks required of them by their Class I railroad employer, with dozens suffering life-altering injuries. Despite all of the technology and modern-day advancements—the functionality of rail equipment is still crude, the hours are still relentless, and the work environment is still unsafe. Granted, some progress was made over the years, but much, if not most, has been undone with the adoption of a business model called Precision Scheduled Railroading (PSR) which has left the state of railroad safety today is in shambles.

This deterioration began during the prior administration that allowed railroads excessive freedom to forego safety requirements to achieve their PSR driven goals and to satisfy the pressures from their Wall Street investors. Prior to PSR, railroads were enjoying the fruits of the safest, most productive era in railroading history which was borne and brought by the two-person crew.

PSR has led to the railroads significantly reducing service and reducing employment. This in turn has lessened the number of required inspections, as well as the quality of inspections mandated by regulations. To that point, there have been so many carmen inspectors removed that operating crews are now being forced to perform inspections that they are not qualified to conduct, nor are they equipped with the necessary tools to perform the tests.

According to AAR equipment manuals and FRA regulations, there are sixty-six (66) safety points on a railroad car. Many railroads now only allow 1½ minutes to inspect each car. Of course, this results in more trains being inadequately inspected and defective cars being transported. Longer, heavier, trains in operation today call for more, not less, attention to inspections and safe equipment.

Since 2015, there has been a 30% reduction of employees. With such a reduction in employment, there should have been a corresponding reduction in employee injuries. But that has not been the case.

Congress has not comprehensively addressed railroad safety since 2008. We acknowledge that Congress, in the Infrastructure Investment and Jobs Act, Pub. L. 117–58, addressed several issues critical to railroad employees. However, many safety problems continue to exist, and amendments are long overdue. The railroad workers have various proposals which are attached for your consideration that would significantly improve safety.[1]

SAFETY STATISTICS

Railroad safety has grown worse since 2020. (See chart below).[2]

[1] See Attachment A

[2] Source: Table 1.12, https://safetydata.fra.dot.gov

	2020	2021
Accidents/Incidents	8,792	9,192
Total Fatalities	746	902
Fatalities at crossings	196	237
Collisions at crossings	1,906	2,131
Employee on duty injuries	2,961	3,054

Derailments were reduced slightly from 1,116 to 1,073, but that is still unacceptable.

A few specifics are illuminating. For example, on Norfolk Southern, during a 7-month period in 2021, five conductors suffered amputations and crushing injuries. Two of these amputations happened to newly marked up new hires who went through the reduced training by NS. One new hire rode a runaway car with no brakes for seven miles. This is a blatant disregard of safety and the wellbeing of their own employees. This is due, in part, because the NS has reduced its training program for operating crews from 18 weeks to 6 weeks. This not only jeopardizes the safety of a recently promoted conductor, but it also jeopardizes his or her fellow co-workers, and every community and industry they encounter.

There are a number of hidden safety issues that the railroads do not report to the public or FRA. For example, my office has received thousands of complaints regarding technological failures, including positive train control failures. Our organization has received reports of 187 PTC failures alone this year. That flies in the face of the railroad argument that PTC is the answer to the elimination of human factor incidents and justification to further reduce crew size. There are likely more that were not reported for fear of retaliation. Also, FRA sponsors a voluntary confidential program allowing railroad carriers and their employees to report close calls. The problem is that no Class 1 railroad is participating. The participants in the program evaluate an issue and make recommendations for corrective action. Employees are not retaliated against for being involved in a close call, if he/she reports the incident. Nearly all transportation incidents are preceded by a chain of events, one of which might have prevented the accident if it had gone another way. When railroads analyze individual close-call events as a group, safety risks can be identified, and solutions developed. Close call reports can also provide important safety information to the FRA so that it can more effectively share important safety information with other carriers and develop safety and enforcement tools to address any widespread safety problems.) The airlines have a similar program called Aviation Safety Action Program (ASAP) which has contributed to the airlines' stellar safety record.[3]

Another factor in the poor safety record is the fact that the railroads have not put its profits into improving safety. As pointed out by Mr. Martin Oberman, Chairman of the Surface Transportation Board, U.S. railroads have reduced service to customers, raised freight rates, while deriving $191 billion in dividends and stock buybacks since 2010. The railroads paid out $77 billion in dividends during that period. Recently, NS issued a $10 billion buyback of its stock. While the above benefits the railroads stock price, it certainly did not improve safety.

PRECISION SCHEDULED RAILROADING

Precision Scheduled Railroading is a service model the Class I railroads have adopted, or are adopting, in an effort to streamline operations. They tout it as providing shippers with consistent and reliable service. PSR is the brainchild of Wall Street urging railroads to increase their stock price. Implementing PSR has helped the railroads lower their operating ratio which, in turn, assists investors determine the financial health of a company. The adverse effect of PSR greatly outweighs the increased profits of the railroads. The significant reduction is the number of employees has greatly impacted safe operations, increased fatigue associated with the same demanding work with fewer employees, less training, less inspection of cars, deferred maintenance, improper train make up, and potential safety hazards being glossed over.

One serious safety issue arising now is that yardmasters are required to supervise and monitor yard movements and radio communications of several yards at once, and in some cases across an entire state. As a result, emergency radio communications are being missed, and improper instructions are becoming more common.

[3] See Attachment B

The railroads know that they can operate with little oversight by FRA. The current administration is trying to improve this problem, but as a study by the GAO pointed out, the FRA "... estimates that its inspectors have the ability to annually inspect less than 1 percent of the railroad activities covered in regulation." *RAIL SAFETY Improved Human Capital Planning Could Address Emerging Safety Oversight Challenge*, Report to Congressional Requesters, December 2013, GAO–14–85.

I testified at the "Hearing on Urgent Issues in Freight Rail Service" before the Surface Transportation Board on April 26, 2022, and pointed out the many safety problems that have occurred as the result of PSR. My testimony is attached.[4]

NEEDED SAFETY IMPROVEMENTS

Attached to my testimony are the much-needed safety improvements. Some of these include crew size, fatigue and hours of service, close call reporting, train length, blocked crossings, damages against employees, proper train make-up, electronic controlled brakes, speed signs, safe handholds on tank cars, union representatives allowed on railroad property to inspect for safety, whistleblower, and Mexican trains. I will discuss some of these.

CREW SIZE

On March 15, 2016 (81 Fed. Reg. 13918), FRA issued a Notice of proposed Rulemaking covering all crew size issues. On June 15, 2016 (81 Fed. Reg. 39014), FRA noticed an oral hearing on the NPRM. The 0MB did not clear the regulation before the end of the Obama administration. Three years after the NPRM, the prior administration withdrew the proposed regulation. 84 Fed. Reg. 24737. In the withdrawal, the FRA also ruled that states were preempted from issuing such a rule. This was done without any prior notice to the public. On Feb. 23, 2021, the U.S. Court of Appeals for the Ninth Circuit ruled that the FRA decision to preempt the states was improper, and it vacated the regulation withdrawal. *Transportation Division of the International Association of Sheet Metal, Air, Rail, and Transportation Workers; Brotherhood of Locomotive Engineers and Trainmen v. Federal Railroad Administration*, 988 F. 3d 1170.

It should be noted that President Biden has publicly stated that he supports two-person crews on freight trains. We understand that the FRA is considering promulgating a crew size regulation. However, mandatory legislation is necessary in order to prevent a future Administration's attempt to repeal such regulation.

FATIGUE AND HOURS OF SERVICE AMENDMENTS

Fatigue continues to be the greatest safety issue in the rail industry. In 2008, Congress enacted some hours of service improvements. *See*, Pub. L. 110–432, §108. However, many railroads still abuse the law and changes are necessary to create a safe operating environment. Fatigue can be significantly eliminated by requiring some hours of service changes. All freight service assignments without defined start times should have at least 10 hours prior notice calling time.

All yardmaster assignments should be covered service under the freight employee's hours of service provisions. This craft typically works 16 hours/day. Yardmasters are safety sensitive employees, and, in the interests of safety, should not be forced to work excessive hours.

All deadheads in excess of three hours should be counted as a job start. Numerous times, after working 12 hours, crews have been required to wait for, and/or be in, deadhead service, for more than 8 hours. This creates a serious fatigue issue. Also, as noted in the STB hearing, it is common for crews to layover between 20 and 30 hours at their away-from-home terminal. Many crews have been forced to remain at the away from home terminals for multiple days, and the railroads treated the stays as mandatory rest days. This is another issue of abuse by railroads. No amount of time off duty at the away from home terminal should reset the calendar clock of job starts, and the employee should not be required to take mandatory rest days at the away from home terminal.

Employees who work road service pools and extra boards are requiredto be available 24 hours a day, seven days a week for a call for duty with only one and a half to two hours' notice. Obviously, many times, the employee must go to work fatigued, creating a major safety issue. A response from a UP manager to an employee's complaint stated "Please plan to be called anytime. Thanks." (Ex. 8 to BLET testimony at STB hearing). It should not be forgotten that many trains transport hazardous

[4] See Attachment C

materials, including chlorine gas, anhydrous ammonia, propane, etc. One full tank car can weigh 131 tons. Obviously, only alert employees should operate such trains.

Current practice by many railroads is not informing an employee how long an interim rest period will be. The result is that the employees are unable to obtain reasonable rest. Interim release periods should require railroads to notify the crew before going off-duty. If the crew is not notified, the 10 hours uninterrupted rest should apply.

Another major problem is lack of nutritious food for employees at their away from home terminal. Having hot nutritious food available for railroad employees has been a serious problem for a number of years because of FRA failing to enforce the current statutory requirement. For example, the FRA has allowed the railroads to provide canned, prepackaged, and frozen fast foods to be in compliance with the requirement for "suitable food". See, April 29, 1991, FRA interpretations of Hours of Service law. A railroad should be required to provide hot nutritious food 24 hours a day at the sleeping quarters for a particular crew at the away from home designated terminal, and at a release location which is available for rest for a particular crew. If such food is not provided on a railroad's premises, a restaurant which provides such food should not be located more than 5 minutes normal walking distance from the employee's sleeping quarters or other rest facility. Fast food establishments should not satisfy the requirements of this subsection.

Last, but not least, is the practice by some of the major carriers, such as BNSF and CN, to impose draconian attendance policies. Attached is the BNSF Policy and Q&A.[5] As you can observe, it severely limits the ability of employees to being able to mark off duty for such things as medical issues and family emergencies. For example BNSF"s most recent absenteeism policy known as "Hi-Viz," which was unilaterally imposed upon its employees on February 1, 2022. The policy only allows for a worker to have one day off a month and penalizes them for sick time or for needing to take care of their family when a medical emergency arises. It also assesses discipline, or, at the very least, disincentivizes our members from utilizing family medical leave and receiving necessary rest. The employees are not even allowed to take time off for FRA required hearing and vision certification requirements. As a result of the PSR, employees are forced to decide between rest or spending time with their family. Members must go to work fatigued because railroads afford them no other option—work or be fired.

LONG TRAINS AND BLOCKED CROSSINGS

One of the features of PSR is that many trains now exceed miles in length and transport hazardous materials. As shown at the STB hearing, on CSXT during the 1st Quarter of 2022, a train departing South Schenectady, NY totaled 24,138 feet. A number of the railroad's trains exceeded 20,000 feet. This is typical throughout Class 1 railroads and creates many safety problems, mechanical and logistical, such as the inability to maintain adequate brake pipe pressure, which is needed so a train can safely slow and stop. As trains lengthen, incidences of them breaking apart are far more frequent, and a crewmember cannot observe and monitor an entire two-mile-long train by looking out of the window. Long trains create more air brake problems (especially in cold weather), sticking brakes, flat wheels, more slack action, and couplers and drawbar limits being exceeded, less track time for maintenance, etc. Also, when a conductor is required to walk a long train, many times on uneven terrain and during all weather conditions, the portable radios often times lose contact with the engineer in the lead locomotive. A train's two-way telemetry device and distributive locomotives lose contact with the lead locomotive. One such incident caused a runaway train on the Union Pacific in October 2018 killing two crewmembers. The track was PTC active at the time. We have daily reports of loss of communications and it's a wonder that we have not had more catastrophic events as a result.

When a train is too long, and there is a loss of communication with the rear of the train, the locomotive engineer cannot activate the brakes at the rear of the train. Most importantly, when a long train becomes disabled where it blocks a crossing, it is far more difficult to uncouple the train to open crossings. On April 25, 2017, the National Legislative Director of SMART–TD wrote to the Administrator of the FRA, expressing specific safety concerns about railroads operating excessively long trains. He sought an emergency order to limit the length of trains. FRA responded on March 7, 2018, that the railroads are operating the longer trains "in an attempt to enhance service delivery and operational efficiencies." The response by FRA did not acknowledge the safety problems inherent in such operations. On May

[5] See Attachment D & D–1

21, 2021, Grady Cothen, a former Associate Administrator for Safety at FRA, gave a presentation at the Transportation Research Board Annual Meeting on the serious safety problems inherent in operations of long trains. His document is entitled "Management of In-Train Forces: Challenges and Directions". FRA has not taken any affirmative action as a result of the presentation. Congress must step in and mandate that the length of trains be limited.

An obvious problem with long trains is that in many instances railroad crossings are blocked for long periods of time. This is a major safety concern for emergency vehicles. Congress should prevent railroads from blocking crossings after a certain length of time. Some courts have ruled that states do not have authority to regulate this issue. *See, CSX Transportation, Inc. v. City of Plymouth*, 283 F. 3d 812 (6th Cir. 2002). Crossings blocked by extra-long trains present more than a simple inconvenience to drivers. They present legitimate dangers to the lives of the public by potentially obstructing emergency vehicle traffic, which then may have to go miles out of their way, especially in rural areas, to respond to a fire, accident or medical crisis. Relating to train length, the FRA has acknowledged that blocked crossings is one of the largest complaints received from congressional members. This can easily be corrected by requiring that the train crew promptly make a separation of the train after a short time period. In addition, having a Conductor on the train is necessary to be able to do this in a timely manner.

Another reason for the blocked crossings is that railroad sidings, nor yards, were ever constructed to accommodate these huge trains. As a result, trains must remain on the main tracks for long periods, many times blocking crossings.

We acknowledge that Congress, in the Infrastructure Investment and Jobs Act, requires the FRA to establish s blocked crossing portal to collect information regarding the cause of blocked crossing. (Sec. 22404). Everyone in the industry already knows the cause—it is long trains. Congress needs to substantively address this problem now.

IMPROPER TRAIN MAKE-UP

For many years, improper distribution of loaded and empty freight cars (*i.e.*, when a railroad attaches empty cars in the front of a consist and loaded cars on the rear) has caused countless derailments. In-train forces from the rear cause unsafe train handling and result in derailments when a train slows. These forces break equipment, cause rails to turn over or cause cars to climb the rails. Heavier freight cars and longer trains create more of these forces.

Over the years, too many derailments could have been prevented by proper train make-up. The CSX derailment in Hyndman, PA, on August 2, 2017, is a good example. There, 33 cars derailed, including 3 hazardous materials cars which erupted, resulting in a fire. There were 128 loaded cars and 50 empty cars in the train. The NTSB issued a report of the accident, stating that one of the probable causes was "the placement of blocks of empty rail cars at the front of the train consist." (NTSB Acc. Rep. NTSB/RAR–20/04, pgs. vii and 29). The Board pointed out that 90 % of the train's total tonnage was behind the lead 42 cars, resulting in excessive longitudinal and lateral forces exerted on the empty cars.

In 1994, Congress required the Secretary to study existing practices regarding the placement of cars on trains, with particular attention to the placement of cars that carry hazardous materials, and the FRA concluded that no new regulations were needed. We believe that conclusion is outdated, particularly with the current use of longer trains. The quality of train make-up has deteriorated with the advent of longer trains. The Association of American Railroads has a Train Make-Up Manual, which provides guidelines on train make-up. These are not enforceable and are violated constantly. Congress should address this issue by requiring FRA to promulgate regulations mandating proper train make-up.

DAMAGES LAWSUITS BY RAILROADS AGAINST EMPLOYEES

The Federal Employers' Liability Act was enacted in 1908, which allows injured rail workers to file claims when railroads are negligent. Not until recent years did the railroads began filing lawsuits against employees for damages to railroad equipment. Some courts have ruled that a railroad could seek damages against an employee arising out of an accident. *See Norfolk Southern Rwy. Co. v. Tobergete and Hall*, Civil Action No. 5:18–207–KKC (E.D. KY). In this case, the railroad is sought $3,770,420.65. In another decision, *Ammons v. Wisconsin Central, LTD*, 124 N.E. 3d 1(S. Ct. Ill. 2019), cert. denied, Oct. 5, 2020, the appellate court upheld a lower court decision that a railroad could seek property damages against an employee arising out of an accident in Joliet, Illinois. In this Illinois case, the railroad contends that it sustained property damages in excess of one million dollars as a result of the colli-

sion. The case has been remanded back to the Illinois circuit court for discovery and preparation for trial.

There are only a handful of other cases relating to the same issue. *See Nordgren v. Burlington Northern RR*, 101 F. 3d 1246 (8th Cir. 1996); *Schendel v. Duluth, Missabe, et. al.*, RR, 2014 WL 5365131 (MN. Dist. Ct.) (RR seeking $2 million); *Mancini v. CSX Transp., Inc.*, 2010 U.S. Dist. LEXIS 75724 (N.D. N.Y. 2010); *Norfolk Southern Rwy. v. Paul Murphy, et. al.*, 3–03-cv-665 (N.D. Ind. 2003); *Kansas City Southern RR. v. Morgan*, No. 94–5016-cv-sw-8(W.D. MO. 1994); *See also* Michael Beethe, *Railroads Suing Injured Employees: Should the Federal Employers' Liability Act Allow Railroads To Recover From Injured Railroad Workers For Property Damages?*, University of Missouri-Kansas City L. Rev. 232 (Winter 1996).

If allowed to continue, the vast majority of railroad accidents will create a serious financial burden on railroad employees and their families and which will result in numerous bankruptcies. It is common knowledge that potential property damages in a train accident can be enormous, resulting in millions of dollars. When compared to the amount of reportable property damages in railroad accidents, the only valid conclusion is that a railroad will not be able to recover damages from its employees. Because there is no realistic opportunity for a railroad to recover such property damages, a railroad's *only* intent for seeking such recovery is to thwart an injury claim by the employee.

Recent Supreme Court Decision

On April 28, 2022, the Supreme Court, in a 4–4 decision, upheld a decision of the U.S. Court of Appeals for the 7th Circuit, which held that a locomotive was not "in use" under the Locomotive Inspection Act ("LIA"). 49 U.S.C. §20701. There was no written opinion by the Supreme Court. Justice Barrett took no part in the consideration or decision of this case because she authored the opinion in the court of appeals. The case is entitled *LeDure v. Union Pacific RR*. The 7th Circuit decision is located at 962 F. 3d 907 (7th Cir. 2020). The effect of the ruling is that, going forward, there will be numerous expensive litigation nationwide attempting to determine if the Supreme Court's decision prohibits application of the LIA.

In the *LeDure* case, the conductor, who brought the FELA case, was preparing a group of locomotives for departure, and he slipped and fell while walking along the locomotive walkway. The lower court held that because the locomotive was stationary, was on a side track, and was part of a train still needing to be assembled, it was not *in use* at the time of the fall. The court of appeals upheld the lower court's reasoning and decision.

Evidence demonstrates that a greater number of employees are injured on locomotives not moving, than on moving locomotives. It should not matter if a locomotive is moving or not. Any employee injured while working on a locomotive should be protected to the same extend as if he/she is injured while the locomotive is moving. Statistics compiled by FRA from railroads' reporting show that between CY 2015–2021, there were 1,660 injuries to employees in a locomotive standing in the cab or walkways, and during the same period there were 388 injuries while a locomotive was moving. *See*, https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/castally1.aspx. (Table 2.04) Operating crews do more than transport freight across the country. Much work is required prior to any movement. Many crews are assigned to build trains in hundreds of rail yards throughout the country. They board an alight locomotives and rail cars constantly in the yards and are exposed daily to the hazards which the FRA has addressed in the safety regulations.

Congress can put an end to the great expense litigating this issue by eliminating the "in use" requirement under the LIA.

Time requirements imposed upon FRA

Based upon a 2021 court of appeals decision, mandatory time limits Congress has placed upon FRA has limited validity. In *SMART–TD and BLET v. FRA*, the U.S. Court of Appeals for the District of Columbia Circuit, citing a Supreme Court decision, ruled that "If a statute does not specify the consequence for noncompliance with a statutory timing provision, the federal courts will not in the ordinary course impose their own coercive sanction." 10 F. 4th 869, 874 (Aug. 20, 2021).

Congress, among other requirements, mandated that FRA promulgate a risk reduction program, including a fatigue management requirement. 49 U.S.C. §20156. Congress requires that FRA must finalize a regulation within 12 months of the notice of proposed rulemaking. 49 U.S.C. 20103(b). In the above case, the final rule was promulgated nine years after the advance notice of proposed rulemaking was issued and five years after the notice of proposed rulemaking was issued. That clearly violated the congressional mandate, but the court, nevertheless, upheld the

regulation. The FRA still has not promulgated a final Fatigue Management regulation.

Congress needs to insert a consequence for noncompliance with 49 U.S.C. 20103(b).

There are a number of other needed safety amendments, which are attached to our testimony. We urge you to address each of these issues.

We thank you for your consideration.

ATTACHMENTS

[The attachments referenced in Mr. Ferguson's prepared statement are retained in committee files and are available online at:
https://docs.house.gov/meetings/PW/PW14/20220614/114882/HHRG-117-PW14-Wstate-FergusonJ-20220614-SD001.pdf]

Mr. PAYNE. Thank you very much.

We will now move on to Member questions. Each Member will be recognized for 5 minutes, and I will start by recognizing myself.

Mr. Morrison, have your members identified defects that were missed by automated track inspection technology inspecting the same track, and can you share an example?

Mr. MORRISON. Thank you, Mr. Chairman, for the question. Yes, my members have identified multiple defects that were missed by the track geometry measurement technology. Several examples exist, and I could get your office a list later. But I have examples of broken rails, stripped joints where the joints rip completely out, and it is the discontinuance in the rail just like a broken [inaudible], tie defects, crossings where the train was coming in contact with the crossing. We provided several examples in our lawsuit with BNSF in 2018, and I can provide you as many more as you want.

Mr. PAYNE. Thank you.

Mr. Grissom, what are the effects of allowing carmen only one-third of the usual time to inspect railcars?

Mr. GRISSOM. Employees are pressured to rush the inspection, and they are not doing a proper inspection on the cars or repairs. When you inspect it, you might have to change a brake shoe or go underneath, check the side bearing clearance or clearance on the center plate, and this isn't being allowed because with the pressure from management to get the cars out, to get the train out to keep everything on schedule, there is not enough time or employees allowed to properly inspect the freight trains.

Mr. PAYNE. Mr. Ferguson, what are the safety reasons that two-person crews are the industry standard on Class I freight trains?

Mr. FERGUSON. Well, thank you for the question, sir. The safety reasons are endless. Two sets of eyes in the cab of the locomotive is paramount for the safety of our communities that we operate under. It keeps the trains moving, which helps our supply chain. And, of course, it keeps fellow employees safe at all given times.

Mr. PAYNE. Thank you.

With that, I will yield back and recognize the ranking member.

Mr. CRAWFORD. Thank you, Mr. Chairman.

I want to direct this question to Mr. Bachman. How has automated track inspection technology improved freight rail safety, and how can it be used to help not only in basic safety inspections, but also in potentially identifying security threats to our freight rail network?

Mr. BACHMAN. Thank you, Congressman, for the question. Where automated track inspection has benefited the industry, specifically in our case, over the last decade-plus, we have been able to collect copious amounts of data over nearly 500,000 miles worth of track. And it is the collection of this data and really understanding what the conditions are on the ground that have allowed us to provide metrics to our customers, the railroads, where they can go out and identify specific areas that need the greatest amount of attention and allocate their resources to address those areas that have the most pressing needs.

In terms of the overall safety of the railroads, we are of the mind that by going out and collecting track and identifying tie condition, really across the country, we have been able to get a better understanding of overall tie condition, how ties exist in different environments, and that has really allowed the railroads the opportunity to plan better, to plan smarter, and produce an overall greater quality product.

Mr. CRAWFORD. Thank you. I appreciate the response.

And, Mr. Chairman, I will yield back.

Mr. PAYNE. The gentleman yields back.

And now we will have Mr. Moulton from Massachusetts for 5 minutes.

Mr. MOULTON. Thank you, Mr. Chairman.

Now, after reading all of your testimonies from four of you, Mr. Morrison, Mr. Grissom, Mr. Ferguson, and Mr. Cothen, gentlemen, all of you directly called out PSR, Precision Scheduled Railroading, for its deleterious effects on service and drastic cuts to vital personnel. I mean, there is not a single piece of testimony that notes any benefit to PSR whatsoever, which for all intents and purposes, appears to strictly benefit the Wall Street shareholders whose pockets are being padded by this change.

So, for all of you, how have we assembled a panel of industry experts here today and not a single one of you stands by arguably the biggest labor and financial decision implemented in freight rail in the past quarter century? How did we end up here? How did we end up here, and how do we get out of this mess and return to a functional system that prioritizes service capacity and safety and actually grows volume, actually has customers saying, I want to switch from truck to rail, because not only is it better for the rest of America to get these trucks off the highway, but the railways are actually offering better service? How do we get there?

Ms. SANBORN. Congressman Moulton, thank you for the question. I will start. This is Cindy Sanborn from Norfolk Southern, and I represent AAR as well.

I have to tell you that, in my mind, PSR is a catchphrase for things people don't like about what is going on in the railroad. I have to tell you that, at Norfolk Southern, we implemented the basic principles of PSR in 2019, and those basic principles are about turning assets, turning railcars, and not switching them as many places if we don't need to to benefit our customers.

And, as we implemented it in 2019, we actually saw our service being extremely strong, some of the best we have had in many, many years. And what we found was, if we weren't switching cars as many places, and we had the technology of distributed power

and more technology on our locomotives than we have had in years, upgrades to the capability of the track [inaudible] of locomotives that allowed us to build longer trains, and those two things together allowed us to not need as many people to operate, whether it was traincrews or, in fact, we shed about 400 locomotives at Norfolk Southern, so, we didn't need as many people to work on locomotives.

And then we hit a pandemic. And going into the pandemic we saw complete industries—think about the automobile industry that went completely to no production whatsoever. We served that both on the outbound side of finished automobiles and the inbound side on metals and plastics going into making those automobiles. And so, then we furloughed as a result of that change in demand.

And as we have come out of the pandemic, as we all know, the labor market has changed substantially in terms of the amount of people looking for work versus the number of jobs that are needed. And as I mentioned, our employees got us through the pandemic, and they have worked tirelessly and very, very diligently. And we are hiring very aggressively to help solve these service issues because we want to grow our business.

Mr. MOULTON. Ms. Sanborn, look, employees have a tough job. I have worked on a railroad track before. It is technical work. It is often backbreaking work. They need to know the details of that job, and yet, the STB issued an order criticizing Norfolk Southern for a disturbing lack of detail about your plans to improve service, including how many people NS will hire and how you will do it.

I mean, these are obviously challenges, I get it. You are facing challenges. But your employees are doing great work. They are putting it in every day. How come you can't even come up with a detailed plan for how you are going to fix this problem?

Ms. SANBORN. Our discussions, our information we provided to the STB was around our hiring plans, and if you look at our geography, we have 95 hiring locations. If we gave a total number of how many people we wanted to hire, if we didn't have them in the right physical locations, in other words, you could hit that target number but still not have the right people spread across the different locations, we still wouldn't see service improve.

So, trying to answer the question is extremely difficult, but rest assured, we have substantial plans and are recruiting very, very diligently. Some locations we are hiring where we have very little difficulty sourcing employees, and some places the job market is extremely, extremely tight, and we are having trouble——

Mr. MOULTON [interrupting]. What are you doing—what are you doing to address derailments and the fact that these long trains break in two much more frequently than shorter trains and the fact that you don't even have sidings to hold these long trains; the yards can't handle them? So, cars will wait for days just waiting for a long train because you don't have the locomotives, you don't have the personnel to operate these trains. And then you finally get that train over the road, it breaks in half, and when you finally get it back together and get it to a yard, the yard can't even receive it.

Ms. SANBORN. Well, thanks for your——

Mr. MOULTON [interrupting]. I mean, tell me that is not a mess.

Ms. SANBORN. Thanks for your question. In the limited time here and in the sake of brevity, I will tell you that, if we had to run more trains, we would need even more people than we need today. And running longer trains is allowing us to more efficiently move what we can move and safely. I do not think the evidence supports that longer trains drive derailments.

Mr. MOULTON. Well, I would like to look into that further. Mr. Chairman, I hope we can examine that last question further because I think the exact opposite, that we are seeing more derailments, more train breaks because they are so long. Thank you, Mr. Chairman.

Ms. SANBORN. I will be glad to communicate specifically with you about that if you have specific questions.

Mr. PAYNE. Thank you. And I concur——

Mr. MOULTON [interrupting]. Great. Thank you.

Mr. PAYNE. I concur with the gentleman from Massachusetts.

Next we will hear from Mr. García of Illinois.

Mr. GARCÍA OF ILLINOIS. Thank you, Mr. Chairman.

A question for Mr. Grissom. How seriously do you think that railroads take fatigue as a safety issue, and how do you think the FRA's new fatigue rule would change things?

Mr. GRISSOM. Well, the first part of your question there, the railroads are not—I don't believe have taken fatigue at all seriously. Let me give you an example. On CSX, we have a form called PI–82, where the employees can report an unsafe condition. Our members were turning in these PI–82s when they are forced to work 16 hours or even beyond 16 hours. They were telling their managers they were fatigued. They can't even stay awake. They can't perform their job safely.

And the managers refused to accept these PI–82s, unsafe condition forms. They clearly stated that these are not a safety concern. This is not part of their safety program. And this is what they are continuously telling our members. This just happened on Monday right when the fatigue report came out, and I can tell you, CSX, for one carrier is not taking it seriously. The only thing that gets their attention is if it affects their profit. If you hit them in their pocketbook, that is what they take seriously. Thank you.

Mr. GARCÍA OF ILLINOIS. Thank you. Thank you, sir.

A question for Mr. Ferguson. You mentioned in your testimony that radio communication failures are regularly occurring because of the growing lengths of trains. Can you expand on that and also address the real-life issues that this creates for a conductor and an engineer. And also, what would happen if this would occur while the train was blocking a crossing and a crew was unable to communicate?

Mr. FERGUSON. Yes, Mr. Congressman. Thank you. That is an excellent question. And it happens every day out here across all the Class I railroads that are dealing with extremely long trains. For instance, I just got a report a few minutes ago, there is a train operating across the State of Missouri that is just over 21,000 feet long. So, that is three of our typical trains, let's just say three times 7,000, right.

So, when you are trying to put that train together or you have a crossing that you have to cut, and that means separate the rail-

road cars that are blocking the highway-grade crossing, the conductor has to communicate with the head-end where the engineer is to move the cars and the train back and forth to get everything situated.

And the radios that we are carrying as train men as conductors can't stretch over 2 miles in most instances, and some even less depending on what the weather and the other atmospheric conditions are, so that creates a very unsafe condition. And, if you get the equipment moving and then you need to stop it suddenly, you can't get that message relayed to the head-end.

If you are in a yard operation, management will tell our crews to have somebody relay it, have a yardmaster relay it. Everybody is too busy. There is too much radio chatter going on. There are too many other things that are interfering with the safe operation of that specific move, and it can become very catastrophic very quickly, especially if the train is 3 to 4 miles long. That is insanity. So, it jeopardizes not only our safety but the communities that we have to operate through and when we are stopped and we have to separate equipment across grade crossings.

Mr. GARCÍA OF ILLINOIS. OK. Thank you.

And just a rapid-fire question to Mr. Grissom, Mr. Ferguson, and Mr. Morrison, each of you mentioned the important outstanding safety issues that need to be addressed by the FRA. What is something that the FRA can do to address a concern you raised in your testimony? And real brief, please.

Mr. MORRISON. Thank you, Congressman. I would like to start, if it is possible. As we said, I would say the biggest thing that FRA could do is start enforcing the regulations on manager disqualification for knowingly violating whistleblower protections. We have been asking the FRA to look at those regulations and implement them in an industry that is known for its retaliatory behavior and making it hard on workers.

Mr. GARCÍA OF ILLINOIS. Thank you. Anyone else? Because my time is almost up.

Mr. GRISSOM. Yes, I would like to add just to have the FRA show up more, enforce the regulations, and don't tip off management before they come on the property so they get a true picture of what is the day-to-day operation.

Mr. GARCÍA OF ILLINOIS. OK. Thank you, sir. And I think my time is up, so, Mr. Chair, I yield back.

Mr. PAYNE. Thank you. The gentleman's time has expired.

Now we will have the gentlelady from California, Mrs. Napolitano, for 5 minutes.

Mrs. NAPOLITANO. Thank you, Mr. Chair. I agree with the comments from my colleagues on the length of the trains because that is one issue that I have had long in my area.

But, Ms. Sanborn, I have been long concerned about grade crossing safety and blocked crossings. The statement from the Association of State Railroad Safety Managers describes the harmful safety impact of blocked crossings. But they also say some railroads are requiring local municipalities to pay maintenance fees for various grade crossing improvement projects resulting in delay, canceling, or scaling back a project intended to enhance grade crossing safety.

These maintenance fees have long been paid for by the railroads, but now, shortly after Congress made available billions in grants to support grade crossing improvement projects, railroads are trying to pass the buck. We should be working together to improve the grade crossing safety, not creating more obstacles. And why are the railroads now having governments pay for these maintenance fees, and can your company and AAR look into this and please reverse the trend?

Ms. SANBORN. I am sorry, I could not quite understand what you were saying. If somebody else did, I am happy to hear them. Help me understand better what you just asked me. I just couldn't hear you.

Mrs. NAPOLITANO. Well, it has to do with the rail crossings and the grade crossing improvements. Prior to this, the railroads took care of the maintenance fees, and now they are asking the communities to pay for it but shortly after Congress made available billions in grants to support them. And why are the railroads now having governments pay for these maintenance fees, and can your company and AAR look into it and please reverse the trend?

Ms. SANBORN. Yes. So, as far as road crossing maintenance fees, we pay for the operation of the crossing once it is installed. And, if there is some specific questions that you have, Congresswoman Napolitano, I will be happy to look further. I am not that conversant on the issue that you are bringing up specifically, but we will get back to you with an answer.

Mrs. NAPOLITANO. Well, this certainly is a problem. And I agree with my colleagues' comments that the railroads are making profits for Wall Street, and the communities are suffering. And we need to be sure that we back the employees because they—and as far as the whistleblowers are concerned, maybe we should make more availability to them to tell us what is going wrong so we can take action.

And I know that the railroads have autonomy over much of what happens on the land, but it is important that we provide more safety for the employees. I know, in my area, there are many employees of the railroad, and sometimes they come to me with some of the issues that they feel are important for their safety, but we don't have enough input to be able to take action on it.

Ms. SANBORN. To your point, I would agree that and involve myself in listening to employees. In fact, in the last 30 days, I have been in Roanoke, Virginia; Cincinnati, Ohio; Pittsburgh, Pennsylvania; and I will be in the yard in Atlanta here on Thursday and listening to our employees and what they have to say around safety and concerns that they have.

I think that there is general frustration that they would like to see the railroad operate better. They feel better when the railroad operates better. And we absolutely want to do that, both from a safety perspective and serving our customers as well.

I would also say that part of the solution is hiring, and we are very aggressively hiring and need our existing employees that are working the jobs today to help train new employees. And this is across all crafts. This is not just T&E.

And to your point around crossings and paying for things, I would like to make this point: we compete across many, many

areas. We compete in service. There are alternatives to using our service. We compete in terms of cost to be able to be the most efficient, effective as we can so we can charge a reasonable price for our service. And we compete from a standpoint of capital markets and having access to those capital markets by having shareholders buy our stock.

So, all three areas are very important areas for us to be effective and efficient and serve our customers with the overall umbrella constantly being safety. And we want to grow our business. We feel that we are very climate friendly. We know we are very climate friendly. We offer our customers an opportunity to reduce their carbon footprint, and only can we do that if we are able to provide a very, very good service. And it takes our employees to do that; if it weren't for them, we would not have a business. So, I think we are aligned in many, many areas. I think frustrations might exist as well, but thank you for your questions.

Mrs. NAPOLITANO. I would like to be able to connect with you later, because there are many other points that I would like to bring forward.

Thank you, Mr. Chair. I yield back.

Mr. PAYNE. The gentlelady yields back.

We will now have the gentleman from Georgia, Mr. Johnson, for 5 minutes.

Mr. JOHNSON OF GEORGIA. Thank you again, Mr. Chairman, for having this hearing, and I thank the second panel of witnesses for your testimony today.

Workforce cuts by Class I railroads have decimated their workforces by one-third of their size since 2015, and what is especially shocking is that this cutting of the labor force predates the pandemic. To date, rail companies have failed to rehire previously furloughed workers, leading to labor shortages on many rail lines.

Mr. Grissom and Mr. Morrison, do you think harsh and unduly challenging working conditions play a role in workers deciding not to return to the workforce, such as forced overtime, heavier workloads, and management pressure to circumvent safety?

Mr. GRISSOM. Yes. Thank you for the question. And you are correct; we saw this problem before the pandemic, and one of the issues is the railroads. They will furlough somebody. They will be furloughed for a year or two, call them back. They may work another year or two and then get laid off again. And people are just sick and tired of being a part-time employee, and they are just in a dilemma during the part of the furlough.

And so, you are right about the conditions and the intimidation and not being respected as an employee at work. This is what we are hearing from our members. And we are seeing employees with 20, 25 years into the rail retirement system, and we have got a unique rail retirement system where you can have 30 years at age 60 and fully retire, and we are seeing people with 20, 25 years of service walking off the job and——

Mr. JOHNSON OF GEORGIA [interrupting]. And they are not coming back because of the work conditions that are in existence at this time. Isn't that correct?

Mr. GRISSOM. Yes. It is just they don't feel safe at work. They just don't feel like they are taking safety seriously.

Mr. JOHNSON OF GEORGIA. OK. Thank you.

Mr. GRISSOM. Thank you.

Mr. JOHNSON OF GEORGIA. All right. And, Mr. Morrison, what do you think about it?

Mr. MORRISON. Yes, thank you for the question, Congressman. This is a great topic. Yes, the conditions our members are being forced to work in right now are just catastrophic. And a lot of them—yes, the work is hard and, yes, it is taxing on our members and it is taking physical tolls, but also our members are very professional in what they do.

And we have members also walking away from the industry because of what they see this automated track inspection is doing. They don't feel safe as a track inspector, and they don't feel that the railroads are making that—giving them the tools that they need to keep that railroad track safe. So——

Mr. JOHNSON OF GEORGIA [interrupting]. Well, let me ask you this question: What types of changes to working conditions would be needed to encourage workers to remain on the job or return to the job?

Mr. MORRISON. So, for the maintenance-of-way employees, yes, hiring and getting more people out there is absolutely critical. Now, the railroads don't value their employees like they say they do. We are in negotiations right now, and they are not really keeping the industry as good of a job as it used to be, and it is a highly hostile workforce. It is the only industry I know of where our members actually purchase insurance for when they get fired to help get them through the process of going through the investigation and try to get back, which might take up to 2 years.

Mr. JOHNSON OF GEORGIA. Yes. Let me ask this question, Ms. Sanborn. In recent years, trains have been growing consistently longer with lengths now reaching more than 3 miles. What factors, Ms. Sanborn, are evaluated when determining how long a train should be, and would you agree that the decisionmaking process is primarily driven by cost factors rather than safety?

Ms. SANBORN. I will tell you that our decisions around train size and how we plan for that are created on needs of service for our customers and how can we move that freight most efficiently. And train size does play a factor in it, and anytime we operate a train of a different type or longer train on a geography that we haven't before, we do simulations to ensure that it can be done safely.

Mr. JOHNSON OF GEORGIA. Well, you are trying to get as much money as you can out of each shipment, and so that is why train lengths have gotten longer. Isn't that correct?

Ms. SANBORN. It is like I mentioned before, just real briefly, we compete in service. We compete in cost to make an effective service to be able to charge a decent price. So, there are a number of reasons that we get the benefits of longer trains and can then handle more business because we compete more effectively in that way.

Mr. JOHNSON OF GEORGIA. Thank you. I yield back.

Mr. PAYNE. The gentleman's time has expired.

We will next hear from the gentleman from Massachusetts, Mr. Auchincloss, for 5 minutes.

Mr. AUCHINCLOSS. Thank you, Chairman.

As we begin to inject billions into our Nation's infrastructure, including, of course, rail, no project will be able to get off the ground without a workforce. Railroading is a 24/7 operation, frequently requiring odd working hours and unpredictable schedules.

The average total number of workers employed by the Class I railroads at the end of 2021 was nearly one-third less than the total employed in 2015, according to data reported by the railroads and published by the Surface Transportation Board.

For both Mr. Ferguson and Mr. Grissom, you have testified that workers are leaving the industry because of worsening conditions on the job. As workers leave the railroads and aren't being replaced by new hires, what effect is that having on the workload for the people still there?

And, Mr. Ferguson, you can begin.

Mr. FERGUSON. Yes, Mr. Congressman. Thank you.

What it is doing to the existing workforce is basically unbearable. They put forth these draconian attendance policies. They want more out of the workforce they have today, and it is making their family life, their work life, every part of it unbearable because they are so short-handed.

If you are home, if you are fortunate enough to get time with your family, the phone is constantly ringing once you become rested under the hours of service. They don't have enough people to adequately staff the other trains that you are technically not responsible for, so, they are going to constantly ring your phone. That may be in the middle of the night while you are trying to get sleep for when you are going to work on your regular scheduled job.

Mr. AUCHINCLOSS. And then jumping in there, for Mr. Grissom, to that point, are workers being expected to take on more shifts and potentially work while fatigued or in unsafe conditions?

Mr. GRISSOM. Yes, they're required to stay over. So, we normally—like you said, we are 24/7, three shifts, first, second, third shift. So, if you are working second shift from 3 o'clock to 11 o'clock, you are thinking you are going to get off at 11 o'clock tonight. But if there is not enough people for third shift, you are going to be forced. It is a requirement. You are going to stay over and perform another shift. So, you are going to be there 16 hours.

And when you get there, you don't know if you are going to work 8 hours or 16 hours or 24 hours or when you are going to get home. And you don't know how to pack a lunch, because you can't leave the property to go through the McDonald's drive-through. You are stuck on that property with no food. That is another issue we have.

Mr. AUCHINCLOSS. Understood.

And switching gears to Mr. Cothen. Your testimony describes a regression in the management of in-train forces, identifying five types of recurring incidents that demonstrate the problem: improperly sequencing cars within a train, lack of appropriate locomotive power, brake lines that are too long to function properly, failure to account for possible loss of communication throughout a train, and relying on onboard systems inappropriately.

If in-train forces is as old as railroading, why are these problems happening?

Mr. COTHEN. Well, I try not to go to head-to-head with the railroad operating officer because they are pretty tough and very

knowledgeable. But the fact of the matter is that, number one, traditionally this was a matter handled by the railroads themselves and pretty well. There were still lapses and the railroad would report the train makeup was the cause of the accident and, indeed, we are still getting reports of train makeup as cause of the accident. Sometimes it is improper use of dynamic brakes, but the underlying cause is the train was not manageable by the crew, given its composition.

The more you take a block of cars and add another block of cars sequentially at different locations, you aggregate the cars into the most efficient train, the less likely it is that that train is going to be made up correctly in terms of the management of in-train forces, and that is what is going on.

Mr. AUCHINCLOSS. Mr. Cothen, I am going to interject there. Thank you for the response.

I do want to give Ms. Sanborn the final minute just to respond to the comments thus far.

Ms. SANBORN. Yes. Thank you very much for that.

Let me talk about in-train forces. A lot of technology has come along that has been very beneficial to us to handle longer trains very efficiently and safely. Distributed power is an example of that. Energy management systems that are basically cruise control systems that help operate the train with an eye towards managing in-train forces, as well as speed and fuel efficiency.

And I would tell you that we have operating rules that give us a—have a very clear understanding of trailing tonnage and specifics around how the train is made up, whether there is end-of-car cushioning devices——

Mr. AUCHINCLOSS [interrupting]. But these accidents are still happening.

Ms. SANBORN [continuing]. Where they are on the train. Pardon?

Mr. AUCHINCLOSS. These are still happening.

Ms. SANBORN. What is happening?

Mr. AUCHINCLOSS. The accidents are still happening at an increasing rate, and so, it calls into question the new technologies and their efficacy to the problems at hand.

Ms. SANBORN. I think the technology is enhancing our operation to make it more safe. And I think the technology will continue to do that, both from a standpoint of train build and train marshaling. And we are continuing to improve in the visibility of that for not just the next station but the entire route of the train.

Mr. AUCHINCLOSS. Yielding back, Chairman.

Mr. PAYNE. Thank you. The gentleman yields back.

That concludes our hearing for today. I would like to thank each of the witnesses for your testimony today.

I ask unanimous consent that the record of today's hearing remain open until such time as our witnesses have provided answers to any questions that may be submitted to them in writing.

I also ask unanimous consent that the record remain open for 15 days for any additional comments and information submitted by Members or witnesses to be included in the record of today's hearing.

Without objection, so ordered.

The subcommittee stands adjourned.

[Whereupon, at 1:11 p.m., the subcommittee was adjourned.]

SUBMISSIONS FOR THE RECORD

Prepared Statement of Hon. Peter A. DeFazio, a Representative in Congress from the State of Oregon, and Chair, Committee on Transportation and Infrastructure

I thank the chair for calling this hearing. With so much change happening in this industry, this hearing provides an opportunity to examine the current state of freight rail safety and discuss the challenges of the day.

At the outset, I think it's important to recognize that this industry has seen significant safety gains over the last several decades. In the late 1980s, for the Class I freight railroads, 20,000–30,000 total accidents/incidents every year were common, so too were more than 2,000 non-grade crossing train accidents, 800–900 total fatalities, and dozens of on-duty employees fatalities. By comparison, for the current 10 years of 2013–2022, total accidents/incidents have ranged from 5,000–6,000 per year, non-grade crossing train accidents have ranged from 1,200–1,600, total fatalities include 400–600 deaths, and on-duty employee fatalities ranged from 6–9 lost lives.

Now, the changes that led to these safety gains did not come easily or happen overnight, and some gains were the result of congressional mandate or regulation that were put in place over the industry's objections.

Those statistics show clear improvements over the decades. With that record in mind, I am worried that our progress has leveled off. Accidents continue and lives are lost every year. And workers are still suffering fatalities and grisly injuries: just last year, in the span of a few days, one Class I had two new conductors with less than a year of service suffer amputations after being struck by on track equipment.

Railroading is inherently demanding and dangerous; it's a 24/7 operation that requires working on or near large, heavy, moving equipment. Trains that can measure miles-long and weigh tens of thousands of tons are traveling through communities.

For those reasons, the conversation about improving safety will never end. We need to be nimble and mitigate issues we know are unsafe.

This is especially true in the era of so-called precision scheduled railroading (PSR). After years of my railing against PSR and the ills it's brought to this industry, the debate about whether the Class I's have cut their workforce too much has finally been to put rest. For two days in April, labor, rail shippers, even Wall Street analysts and the railroads themselves, openly discussed the need to hire more workers. Last month, the Surface Transportation Board told this committee it agrees. Well, it's about time.

Today we'll hear from union witnesses whose members feel they are near the breaking point. They say that because there are so few workers, they're working longer hours—sometimes consecutive days of 16-hour shifts—covering larger territories and feeling pressures to rush their work. We know about these conditions because individual workers are writing in and telling us—saying these pressures are causing untenable fatigue and safety concerns, contributing to poor morale, and prompting some to leave the industry—a stark change from what has traditionally been a sought-after career. This should be troubling to everyone participating in this hearing.

In addition to the worker perspective, I'm interested in hearing from the expert witness who's leveraged his decades of rail safety experience to call attention to a litany of accidents that he believes demonstrates a regression of the industry's management of in-train forces, resulting in repeated risks and preventable accidents.

Another safety expert is here today representing the freight rail industry which of course has a central role in today's conversation. I look forward to hearing their perspective, what they're doing to advance safety, and their commitment to improving the current conditions.

I also want to note that we've been hearing concerns from stakeholders not represented here today. For example, the Association of State Railroad Safety Managers submitted a statement to this committee raising concerns with several new

railroad practices, including a move by some railroads to shift maintenance costs associated with crossing improvement projects, long borne by railroads, to local municipalities, resulting in the stalling, canceling, or scaling back of projects that are intended to enhance crossing safety. The letter raises others concerns such as the impacts of very long trains and the significant challenges in properly managing in-train forces in order to avoid derailments and damaged equipment.

Lastly, I'm pleased that our federal railroad safety regulator is here. Under this Administration, the Federal Railroad Administration has sharpened its focus on safety, launching system-wide audits of the Class I's, audits of crewmember certification programs, inspection blitzes, a doubling down on accident reporting reviews, and rechartered a consensus-building, Rail Safety Advisory Committee. I encourage FRA to continue exercising its important oversight and regulatory authorities to improve safety, and I urge Administrator Bose to listen to the other witnesses testifying here today. If we are employing practices known to create risks and cause accidents—put an end to them. If there are corners being cut for the sake of efficiency and at the expense of safety—put an end to it. The natural role of any safety regulator is to thwart risks and hold all players accountable. That is always your role, and it is especially important while Wall Street has its grip on the industry.

I thank all the witnesses for participating today and look forward to the discussion.

Prepared Statement of Hon. Sam Graves, a Representative in Congress from the State of Missouri, and Ranking Member, Committee on Transportation and Infrastructure

Thank you, Chair Payne, and thank you to our witnesses for being here.

Today, we are reviewing the current state of freight rail safety and proposed security enhancements that ensure the freight railroad industry remains one of the safest modes of transporting goods in the world.

One of the best means of assisting our freight rail industry in advancing safety innovation and improvements is through the federal grant programs offered by the Federal Railroad Administration and other agencies.

These programs offer important opportunities to eligible entities to invest in maintenance and safety improvements, including grade-crossing upgrades and closures, track replacements, and chances to test and use new safety technology.

There are now historic levels of funding available in these grant programs. We must ensure that this money is distributed transparently and fairly with as few impediments as possible to applying and receiving support.

Safety improvements not only protect the railroad industry and the communities it serves, but it also assists in more efficiently moving goods through our essential supply chain.

I look forward to hearing more from our witnesses.

Thank you, Chair Payne. I yield back.

Statement of Chuck Baker, President, American Short Line and Regional Railroad Association, Submitted for the Record by Hon. Peter A. DeFazio

INTRODUCTION

As president of the American Short Line and Regional Railroad Association (ASLRRA), the trade association representing the nation's 600 small business Class II and Class III railroads, I submit this testimony for inclusion in the record of the subcommittee's hearing.

ASLRRA appreciates the subcommittee holding this hearing on safety throughout the national rail network. Safety is the top priority of ASLRRA's members. Short line freight railroads operate 24/7/365 in an ever-changing and complex, increasingly demanding environment, working in all weather and overcoming all manner of challenges and conditions to serve our customers. Through it all, our members are constantly focused on ensuring that their employees get home safely at the end of each shift, and that the communities they serve are enhanced and made stronger by the service we provide.

We are eager to share our insight, perspective and suggestions with this panel.

The country's short line freight rail industry, a vital part of North America's supply chain, is safe and getting safer.

ASLRRA's members are Class II and Class III railroads, all of which are classified as small businesses.[1] Our members are critical links in the nation's freight supply chain, and all are vital engines of economic activity. Together, our members are tied to 478,000 jobs nationwide, $26.1 billion in labor income and $56.2 billion in economic value-add. Our members provide a service that approximately 10,000 businesses nationwide rely upon to get goods and products to and from market.[2]

Short line railroads are especially integral in providing first- and last-mile service, functioning frequently as the first and/or often final link between suppliers and customers who require critical goods and freight. Our members provide this connection in many key industries critical to our country's economic health, including the manufacturing, agricultural, energy, and chemical sectors.

As the first- and last-mile providers for one in five railcars moving across the country on any given day, short lines interface constantly with the public—shippers, community leaders, motorists, and pedestrians—in the mostly small town and rural communities in which we operate.

Short line owners, executives, and operating personnel are active members of their local communities—you see them in the grocery store, at the PTA meeting, on the ballfields, and in your places of worship. Because short lines are small business owners, and they live and work in the communities they serve, safety is more than a good business decision, it is a steadfast personal obligation.

Recent data from the Federal Railroad Administration (FRA) indicates that this past decade has been the safest ever for freight railroading, and that freight railroading is among the safest industries in the nation.

But our work is not done, and we must never get complacent. We pledge to remain ever-vigilant in driving forward with our safety-first mindset.

ASLRRA provides key resources to assist railroads in enhancing safety practices.

ASLRRA has more than one hundred years of history of providing support to small business railroads. Today, our members regularly indicate that the resources provided by the association are critical to their success in all areas of operations—especially safety.

1) *Training and education*. We keep safety at the forefront for our members by providing training and education and partnering with the FRA and other subject matter experts for safety-driven content. Education is provided in-person at regional and national events, and via webinars with nearly 200 recorded sessions on a wide variety of topics.
2) *Investments in safety*. We advocate in Washington, DC for legislation that makes sense for short lines railroads and the public that we serve. We seek laws that drive public money efficiently toward projects and initiatives that make our operations ever-safer, deliver public good by ensuring access to the U.S. economy for rural and small town America's businesses, and provide family-supporting jobs. This includes grant opportunities and tax credits that ensure that our infrastructure is modern, efficient, and safe.
3) *Smart oversight*. We work on behalf of our members with rulemaking bodies such as the FRA, the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the Surface Transportation Board (STB), and the Small Business Administration's (SBA) Office of Advocacy to ensure that regulations drive improvements in safety AND can be reasonably implemented by small businesses. We bring ideas to these agencies to consider in upgrading and modernizing rulemakings that are outdated due to new technologies available, or operational changes. Examples of these efforts include the use of electronic air brake slip systems (eABS), drones for certain types of inspections, and more. Finally, we provide expert advice in rulemakings to ensure there are no unintended consequences for small business railroads.
4) *Safety expertise*. We provide industry expertise in safety compliance, including auditing a railroad from a safety perspective, or helping to solve operational challenges. Recently, our staff and member railroads developed a template training program for 49 CFR Part 243 to ensure that all members could complete the intensive required safety training.
5) *Honoring safety professionalism*. We honor excellence in safety on member railroads with our Jake Safety Award program. Hundreds of short line railroads are recognized each year for winning "Jakes with Distinction", signifying zero

[1] According to the Surface Transportation Board, a Class II railroad has annual revenues between $40,400,000 and $900,000,000; a Class III railroad has revenues below $40,400,000.

[2] The Section 45G Tax Credit and the Economic Contribution of the Short Line Railroad Industry, prepared by PWC for ASLRRA (2018).

reportable injuries annually. Our Safety Person and Safety Professional of the Year awards recognize exceptional careers in safety and are the industry's most esteemed honors.

6) *Elevating safety practices.* As an eligible applicant for certain federal grant funding programs, ASLRRA seeks to provide additional resources to short line railroads to elevate safety practices and to implement technology that will lead to safer performance. For example, in partnership with the Iowa Northern Railroad, ASLRRA was awarded a Fiscal Year 2020 grant through the Consolidated Rail Infrastructure and Safety Improvements (CRISI) program, which will build online and in-person training specifically designed for short line railroads in the areas of operations and safety. Another grant in process through a recent FRA Broad Agency Announcement (BAA) will fund the measuring of environmental impact of practices and technologies that some of our members are currently implementing, while ensuring that safety is not compromised. ASLRRA also received a grant from the FRA to assist our member railroads with the complexities of implementing PTC.

Short lines invest heavily in infrastructure, increasing safety for employees and shippers.

Short line railroading is one of the most capital-intensive industries in the country. Short lines invest on average 25% to 33% of their annual revenues into maintaining and rehabilitating their infrastructure. Additionally, short lines are often the custodians of expensive bridges and tunnels that were originally built by much larger railroads generations earlier and are now reaching the end of their useful lives. Federal funding opportunities like the CRISI grant program provide short lines with an opportunity to meet these challenges.

Through the short line railroad 45G tax credit and government infrastructure investment grant programs such as CRISI and other important USDOT grant efforts (like Rebuilding American Infrastructure with Sustainability and Equity (RAISE), Infrastructure for Rebuilding America (INFRA), and the recently created Railroad Crossing Elimination grant program, among others) short lines have been able to upgrade thousands of miles of track to 286K-lb capabilities and rebuild and repair worn-out and outdated bridges, tunnels and rail to improve efficiency and ensure safer operations.

ASLRRA was pleased to see 24 of 46 Fiscal Year 2021 CRISI grant projects awarded to short line railroads in early June 2022. These projects will make freight rail transportation safer and more affordable than ever in the areas they serve—while providing the most environmentally friendly surface transportation mode available. Upgraded infrastructure will lead to better on-time performance for customers and the ability to handle more freight by rail, taking trucks off the road—decreasing environmental impact and safety concerns for the motoring public—all while delivering better safety performance. The FY21 CRISI grants will provide approximately $150 million in federal funds for short line infrastructure, which is a very welcome infusion, and combined with approximately $1 billion in annual private short line investment, will make a meaningful difference in short line safety and service.

Still, there is much, much more work to be done to catch up with our estimated $12 billion in state of good repair needs. Our members look forward to competing vigorously for future rounds of CRISI funds and putting them to use making the rail network safer for all who rely on it. As the Infrastructure Investment and Jobs Act (IIJA) is implemented and its critical resources are made available, we encourage Congress to robustly fund the CRISI program at the full $1b annual authorized discretionary appropriations level and the administration to prioritize funding for the many freight rail projects that enhance safety, while bringing other benefits, like reducing supply chain bottlenecks, advancing environmental solutions and taking highway-clogging trucks off of highways. These projects are often the biggest "bang for the buck" available in surface transportation.

Short Line Safety Institute (SLSI) drives safety culture improvements for short line railroads.

Founded in 2015 to enhance the safety culture on small railroads, the SLSI is supported by annual appropriations from Congress, via the FRA. Safety culture has been identified as a top priority for the short line and regional railroad industry. Class II and III railroads sometimes lack the resources to conduct comprehensive internal safety culture assessments and evaluations. SLSI was formed to fill this need for smaller, often under-resourced railroads.

The goal of the SLSI and its programs is for the short line and regional railroad industry to perform at an increasingly high level of safety because of a focus not

only on compliance, but on *safety culture*, defined as "*the shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands*."

The SLSI provides several programs, including its flagship Safety Culture Assessment (SCA), recognized as the most robust safety culture assessment in the railroad industry, at no cost to railroads. Many of ASLRRA's members have taken advantage of the staff's 600 years of collective safety experience and made measurable improvements to safety culture as a result. An analysis conducted by the Volpe National Transportation Systems Center in April 2022, Implementing SLSI-Provided Opportunities Supports Safety Culture Growth, reports that railroads who have completed a second "Time 2" SCA performed by the SLSI experienced measurable overall improvement in safety culture, and in each of the ten core elements of a strong safety culture evaluated during an SCA.

The SLSI provides Safety Culture Assessments, Leadership Training, and HazMat Training—all delivered in a variety of formats from in-person to videos, to downloadable Posters and Safety Tips for use during a safety briefing.

Short lines partner with industry experts to continuously improve safety.

ASLRRA works closely with a variety of regulatory bodies, and other industry associations, in the pursuit of strengthening safety practices.

One of the strongest partners for ASLRRA members is Operation Lifesaver, Inc. (OLI). OLI is a non-profit organization and nationally-recognized leader in rail safety education. Since 1972, OLI has been committed to preventing collisions, injuries and fatalities on and around railroad tracks and highway-rail grade crossings, with the support of public education programs in states across the U.S.

The largest areas of risk in train-related deaths and injuries are from trespassing and suicide. Many of these incidents happen at grade crossings. These incidents are tragic for all involved from the train crew to the families impacted and the communities where these incidents occur.

ASLRRA's members provide staff hours to volunteer across the country to educate the public on rail safety. Many short line professionals likewise serve at the state levels of Operations Lifesaver, on boards and as trained presenters.

Our members have helped to support the 82% decline in train/motor vehicle collisions from a 1972 high of roughly 12,000 annual incidents to approximately 2,200 incidents in 2019 through their work with OLI.

Short line railroads urge Congress and the administration to advance safety rules and regulations with known safety benefits and to foster—not hinder—technology and operational practices that improve rail safety.

With safety at the forefront of its members' daily operations, ASLRRA is concerned that the regulatory structure governing the industry fails, in some regard, to meet modern standards and allow for the use of sophisticated technology to more efficiently accomplish tasks that in the past have been done in a now antiquated fashion. ASLRRA shares the strong concerns articulated by representatives of AAR and the country's Class I railroads submitted for this hearing concerning Automated Track Inspection (ATI) activities. We encourage FRA to develop a posture on ATI and use of waivers that advances smart technology—and does not impede its adoption. ASLRRA believes FRA should encourage and incentivize efforts to use technology to make rail safer—not stand in the way of safety efforts with requirements that railroads adhere to now outdated practices. Similarly, ASLRRA encourages FRA to move forward with smarter, more advanced and more modern electronic eABS that replaces outdated methods—and that could eliminate inefficient extra train movements.

Short lines urge FRA to continue its regulatory framework governing excepted track. "Excepted track" is a designation of track on which speed is limited to 10 mph and in which certain types of movements are prohibited or restricted. For decades, short line railroads have used excepted track to serve customers, adhering to FRA rules governing excepted track that ensure safety for workers and the public. For example, these rules require the following: the track must be inspected at the same frequency as Class 1 track; speed on said track is limited to 10 mph or under; there are limits to the number of hazardous materials cars that can be carried; passenger operations are prohibited; and the owner of the track may not designate the track as excepted if the track is close to certain adjacent tracks, near a bridge, public street or highway.

The ability to use excepted track has kept rail service safe and viable for customers and increased public safety by keeping freight off the highway. Proposals that would undermine this framework would harm small business short line freight

railroads, disrupt the supply chain, and inject new safety uncertainties in the movement of goods and freight.

ASLRRA also urges the FRA to publish an NPRM on 49 CFR Part 243 training, which codifies the use of training templates developed specifically for small business short line railroads. The templates are critical to ensuring implementable and thorough training procedures on short line railroads, elevating safety.

Finally, ASLRA is concerned about a rulemaking underway on railroad crew size. The FRA has announced that it will issue a rulemaking requiring a minimum number of crew members on a train in most cases. From what we know, this draft rule has no known, proven, or quantifiable safety benefit. Rather, based on our research and due diligence, it will increase the cost of our members' efforts to provide service to shippers and customers, as many short lines today operate safely with one crew member in the cab, commensurate with the railroads' needs and requirements, or will eventually do so. Any mandate to hire and train more personnel than necessary in rail operations would force small business short line freight railroads to make counterproductive economic decisions between necessary safety upgrades and unnecessary forced hiring. Any mandate stands in stark contrast to the prevailing policy in other modes of transportation that are fostering an increase in unmanned operations—especially in trucking and automobiles. We strongly discourage any rulemaking that will not deliver a documented safety benefit and has the unintended consequence of making transportation more costly to shippers.

CONCLUSION

The short line freight industry is safe, and getting safer. We appreciate the subcommittee's attention to our statement. We welcome future opportunities to provide examples of programs the short line industry is supporting to increase safety, and to collaborate on future initiatives.

Emails from Two Railroad Employees, Submitted for the Record by Hon. Peter A. DeFazio

From: [redacted]
Sent: Tuesday, June 7, 2022 4:01 PM
Subject: Examining Freight Rail Safety hearing

JUNE 7, 2022.

House Committee on Transportation and Infrastructure
Attention: Examining Freight Rail Safety

Dear Congressional members,

My name is [redacted], and I have been employed by BNSF Railway since 2006, about 16 years, as a Locomotive Engineer and Conductor. I am writing to you concerning a grave situation that is occurring right now in this company, and among all carriers in some form in the past few years. The general safety of running trains 24/7 and 365 days a year falls upon these Trainmen workers and other workers in Maintenance, Train inspection forces (Carmen), and signalmen.

In the past few decades, Rail companies have decided that they needed to cut workers to make massive profits for their stock holders. It has resulted in massive employee cutbacks to the point now that the railroads can not even run trains, especially in the past few months. What did BNSF do when they suddenly realized that they did not have enough crews? They did not go out and hire people. instead they doubled down on new attendance policies to make the workers work weeks at a time without an ability to lay off without being punished by the Carriers. BNSF is especially egregious, with a new attendance policy called "HI-Viz". UP has also done a similar, though slightly less horrible attendance policy.

Imagine being on call 24/7. But never being able to lay off because the carrier has limited numbers of lay off slots available to the workers, yet if we try to lay off sick on weekends, holidays or other "special days" that local management can decide (like a county fair), it makes it so that only a tiny percentage of workers can ever lay off on a given day . . . for ANY reason. In my terminal, with less than 140 workers on a conductor board, only 11 can lay off. Right now, they usually do allow people to lay off sick, but recently in Texas, the company has been denying those layoffs.

Laying off sick is often the only means to get any rest when we are working nonstop, and are tired and fatigued. We may work 12–14 hours from home to our away from home terminal. Spend 12–24 hours in that hotel room, then 12–14 hours back home. Often, we only get the minimum RISA required rest of 10 hours. We used

to get an average of 30–40 hours off, but since over 60 have quit our terminal, we are now working the most anyone has ever seen in decades.

RISA does require workers to take 48 hours every 6 "starts", or 72 hours every "7 starts". But what the companies do, is wait for a worker to be "available" for 24 hours and 1 minute, and that "restarts" the "starts". So what happens is that we do not actually get time off, as we are always having to "be ready to work" every day. Many never get RISA time off, though in the past few weeks, we have been so short on workers that dozens now are hitting RISA mandatory time off as we are working every 10 hours.

I know that this is all confusing. But the Railroads have made it confusing. Various ways of laying off, depends on the "points" that the carrier takes off for a certain day of the week. It is easy for someone to get in trouble with these attendance policies, and dozens are being fired weekly now for that alone. That is on top of the 500 that quit last week because they were sick and tired of being sick and tired. About 2000 since Feb 1st 2022, when this policy started (out of about 17500)

Many are quitting mid-career, from 12–24 years, giving up pensions because they are so fatigued and never able to have family time at home. Never able to go to their doctor appointments. Even paying a necessary bill can become a headache, as we are often trying to sleep during the middle of the day.

What is causing all this? It is partly with the carriers insisting in Contract negotiations that they do not want to pay us Cost of living increases, and are demanding 1 man crews, virtually eliminating the Conductors. How do you tell a new hire that their job is probably gone in 7 years? I will tell you, as an engineer, that this is madness. I do not want to be on a train, by myself for 12 hours, with no other human contact. Worse, is if we do have a breakdown, or an accident with the public, the conductor can not be the "first eyes" on the scene for emergency response. As what happened in a derailment a few years ago, a Hazardous materials tank train derailed and caught fire. That conductor was able to cut away the cars that were not on fire, and saved lives. New hires are refusing to stay because they can find better pay, and better hours at other industries. Most people do not even interview anymore, and if they do get a 10 person class, usually only 1 or 2 finish new conductor training. The rest quit because of the pay and attendance policies.

But that conductor's job is increasingly becoming more and more dangerous. A radio "packset" that the conductor uses to communicate to the engineer, was never designed for 2, 3, 4 mile ranges. Yet the conductors are having to walk, often in bad weather, high heat, or feet of snow, 3 miles to the rear end of a train to fix issues, with limited communication. 13,000–15,000ft trains are way too long for that.

The other issue is the fact that many of these trains are in fact too long to fit in sidings. This prevents shorter trains from getting over the road, causing rail crews to "die on hours of service", often having to be taxied an additional 1–3 hours to their terminals, above and beyond their 12 hours of service.

As for Mechanical and signal forces, they too have been cut to the bones. There is not enough to inspect trains to the extent they used to. Not enough workers to service the tracks and rail systems. I think that this is causing more derailments that we have seen in past few years. Carmen used to inspect 150 different things on a rail car. In recent years, that has gone down to less than 60. Go back to the 4 hour "off air" requirement of inspections, instead of the new 24 hours "off air".

I sincerely hope that Congress can address the following:

1) Need 2 Man Crews, for safety and for mental health of workers and the public.
2) Need legislation that requires Carriers to negotiate on attendance policies.
3) Need restrictions on train length to not more than 8000ft
4) Need legislation that gives workers the OPTION to get more time off.
5) Need more oversight on requiring carriers to have more manpower. That includes requiring reasonable contract negotiations for reasonable pay comparable to other industries to attract new hires
6) Need more FRA inspectors, and less exemptions to required inspections.
7) Need changes to Rail labor act, to give the unions more ability to strike. Otherwise the Carriers have no desire to listen, nor negotiate with them, resulting in the mess we have today.

Thank you for your time.

[redacted].

From: Brent Roberts
Date: June 8, 2022 at 7:59:28 AM EDT
Subject: House Comm on Transportation & Infrastructure: Examining Freight Rail Safety

I'm writing in support of any and all legislation or discussion that may come before your Committee regarding efforts to maintain Two Person Crews on railroad freight trains as it might relate to health, welfare and public safety of our Citizens.

Prior to the railroad I served one 3 year tour in the US Army as Military Policeman. After my tour was complete I obtained an Associate Degree and eventually a Bachelor's Degree in Criminal Justice. I was ultimately successful in having a 22 year career as a State Police Agent. I mention this semi-biography to highlight the safety conscious career fields in which I've been involved.

I was hired by the BNSF Railway in Feb of 2006 as a Conductor/Switchman. In Jan of 2008 I achieved enough seniority in my terminal to be promoted to the Locomotive Engineer Training program and subsequently graduated from the program to become a Certified Locomotive Engineer in June 2008. A few years later I was elected to the Safety Committee of my Local Union and was also elected as my Local's Legislative Representative dealing with mostly safety related issues.

Several years after being promoted to a Locomotive Engineer I was operating a southbound train through the City of Norman, OK. This City has quiet zone grade crossings at every one of the grade crossings located within its city limits. This means that as a Locomotive Engineer I am not allowed to blow the train locomotive's very loud horn as the train approaches and then traverses the grade crossing. All I'm allowed to do is have the locomotive's bell ringing. The bell isn't very loud compared to the locomotive's horn.

The City of Norman's Central Business District is near the Amtrak Railway passenger depot and is located adjacent to the grade crossing for Main Street. While the grade crossing utilized by vehicles is equipped with the usual crossing arms, flashing lights and bells, the part of the crossing utilized by pedestrians has no protective devices. This allows pedestrians to cross the train tracks potentially without any warning of an approaching train other than the locomotive's ringing bell.

On the day of this incident I was operating my train approaching the Main Street grade crossing. As a Locomotive Engineer behind the controls of the locomotive I have 3 computer screens that require my constant observation pertaining to the operation of the train, the Positive Track Control (PTC) screen, the Trip Optimizer (TO) screen and the normal screen showing the data fields related to the actual train.

At times keeping up with all three of these computer screens can approach information overload. This is especially true when factoring in insuring that the various safety devices are being operated appropriately when approaching grade crossings, high traffic pedestrian/entertainment areas or listening to radio traffic related to other trains or from the Train Dispatcher.

As my train was approaching the Main Street grade crossing my attention was focused on the various computer screens. I would scan back and forth from the screens then the grade crossings trying to keep track of all the data fields and events outside the train. I wasn't seeing anything unusual outside so I'm looking at one of the computer screens requiring me to take my eyes off of events outside the train.

All of a sudden I hear my Conductor exclaiming "Don't do it". I look up to see a gentleman walking towards the Main Street grade crossing on the pedestrian part of the crossing. He's wearing ear buds and carrying a cell phone ostensibly listening to music while out exercising. It's immediately apparent that he's completely oblivious to the fact that he's about to be killed by walking in front of and being run over by a train traveling at 55 mph.

I immediately reach down and start blowing the locomotive's horn in an attempt to provide warning to the pedestrian. I can see him react to the horn while still striding towards the grade crossing but he first looks towards the south, then swivels his head to the north when he sees the train. He is still striding towards the tracks as his momentum hasn't slowed enough for him to stop . . . yet.

I can see him leaning back and trying to stop his momentum as the train screams by him at 55 mph and I lose sight of him. He is literally bending backwards at the waist trying to keep from walking in front of and being hit by the train.

So little time has elapsed, 'maybe' two seconds probably less, since my Conductor alerted me to the pedestrian's proximity to the train tracks that I haven't even had a chance to activate the train's emergency braking capabilities. Not that the emergency brakes would have slowed the train enough to prevent something by slowing

the train. This was such a bang/bang episode that there was only time to blow the train's horn in an attempt to save the life of the pedestrian.

Ultimately my Conductor was able to look in his side view mirror and see that the pedestrian was able to stop his momentum and other than probably being scared out of his mind as far as I know was uninjured. My Conductor did observe that the pedestrian's body was only mere inches from the side of the train, he estimated it as 4 inches, as it roared by at 55 mph having come that close to probably being killed had he actually been struck by the train.

I'm relating this real life event not to complain about the lack of safety devices on the crossing or even information overload but to point out that this gentleman is ONLY alive today because there were TWO persons inside the cab of the locomotive. Had I been the sole occupant of the locomotive on this day the pedestrian would no doubt have walked out in front of the train and been killed by the blunt trauma impact of the locomotive striking him and he'd have had no idea, literally, what had hit him.

I'm certain that there are countless similar situations across the United States where having two persons in the cab of the locomotive have saved lives and that this is just one more to add to the list. However, what if there are other locomotive engineers with similar stories that are worried about reprisals from their employer and never submitted their stories.

The Facebook post from where I obtained your email address mentioned that you would give confidential treatment to any email sent to you. I'm unconcerned about my email identity remaining confidential. My goal is to highlight awareness of issues similar to this in the hopes that someone else's life isn't lost due to there being only one person in the cab of the locomotive.

Respectfully,

BRENT ROBERTS.

Letter of June 28, 2022, to Hon. Donald M. Payne, Jr., Chair, and Hon. Eric A. "Rick" Crawford, Ranking Member, Subcommittee on Railroads, Pipelines and Hazardous Materials, from Rachel Maleh, Executive Director, Operation Lifesaver, Inc., Submitted for the Record by Hon. Peter A. DeFazio

JUNE 28, 2022.

The Hon. DONALD M. PAYNE, JR., Chair,
The Hon. RICK CRAWFORD, Ranking Member,
House Subcommittee on Railroads, Pipelines, and Hazardous Materials,
U.S. House of Representatives, Washington, DC 20515.

DEAR CHAIRMAN PAYNE AND RANKING MEMBER CRAWFORD,

In light of the Subcommittee's June 14 Hearing on "Examining Rail Safety," which examined the state of freight rail safety and issues pertinent to keeping rail operations, rail workers, and communities safe, I am submitting a brief update on my testimony at your February 5, 2020 hearing titled, "Tracking Toward Zero: Improving Grade Crossing Safety and Addressing Community Concerns."

Operation Lifesaver, which this year celebrates the 50th anniversary of its founding in 1972, is a non-profit public safety education and awareness organization dedicated to reducing collisions, fatalities and injuries at highway-rail crossings and preventing trespassing on or near railroad tracks. In 1986 the non-profit Operation Lifesaver, Inc. national office, which I lead, was created to help support and coordinate the efforts of state Operation Lifesaver programs. Operation Lifesaver's authorized volunteers provide free safety presentations to reach audiences of all ages across the U.S. and beyond.

We are proud of our role in making communities safer through virtual and in-person rail safety education. Our safety partners include federal, state and local government agencies, highway safety organizations and America's railroads. Together, we promote the three E's—Education, Enforcement and Engineering—to help people make safe choices around railroad tracks and trains.

Since OL's inception in 1972, collisions at railroad crossings have dropped by more than 80 percent, from 12,000 annually to approximately 2,100 in 2021. But there is more work to do—every three hours in the U.S., a person or vehicle is hit by a train.

Since I testified before you in February of 2020, Operation Lifesaver has leveraged additional grants to:

- Provide competitive funding for 41 state crossing safety and trespass prevention campaigns totaling $756K from the Federal Railroad Administration (FRA) in-

cluding states that rank among the top 15 for grade crossing and trespass incidents.
- Provide competitive funding for 36 state crossing safety campaigns totaling $600K from the Federal Highway Administration (FHWA) including states that rank among the top 15 for grade crossing incidents.
- Provide competitive funding for transit rail safety campaigns to 6 transit agencies in 4 states totaling $107K from the Federal Transit Administration (FTA).
- Provide competitive funding for 11 state crossing safety and trespass prevention campaigns totaling $135K from OLI's private funder, the Posner Foundation of Pittsburgh.
- In all, these grants from 2020–2022 total approximately *$1.6 million*, with an additional *in-kind return from the 2020 and 2021 grants alone of more than $1.2 million* to states and communities across the U.S.

In addition to these ongoing grant programs, since 2020 Operation Lifesaver has completely refreshed and updated our collateral materials for drivers, pedestrians, professional drivers, outdoor enthusiasts, students, and more. We also released new public service announcement (PSA) campaigns aimed at drivers on low-clearance vehicles, shift workers, mature drivers, college students and farm vehicle operators. These materials and videos include actionable safety measures for audiences to stay safe at crossings and along railroad rights-of-way.

Demand for Operation Lifesaver's Railroad Investigation and Safety Course, or RISC, is growing. We have trained more than 190 instructors to teach RISC both virtually and in person to law enforcement officers and other first responders. Since RISC launched, a total of 260 classes have been held with more than 4,200 students completing RISC as of the first week of June 2022. RISC is accredited in 17 states under law enforcement training programs: AZ, CA, CO, GA, IN, KS, LA, MN, MS, MO, NE, NM, ND, OK, SC, TN and TX.

We also spearhead the annual observance of Rail Safety Week in North America to focus attention on the importance of safe behaviors around railroad tracks and trains. Our federal partners, private sector partners and other rail safety advocates are vital to the success of Rail Safety Week in reaching millions of people each year with the safety message. This year, *Rail Safety Week is September 19–25*. I invite you to join us to #STOPTrackTragedies across the U.S.

For Operation Lifesaver's 50th Anniversary, our partners at Amtrak created and put into revenue service across the U.S. a beautiful locomotive emblazoned with the Operation Lifesaver 50th Anniversary Logo and the message, "See Tracks? Think Train!" as a moving billboard reminding people to practice safe behaviors.

This year we also created an online Rail Safety Pledge for children and adults with tips to stay safe. We urge everyone to take—and share—the pledge.

Most recently, Operation Lifesaver was part of the Host Committee for the June 8–10 International Level Crossing Awareness Day (ILCAD) 2022 Conference in Denver, along with the International Union of Railways (UIC), Association of American Railroads, Federal Railroad Administration, Mineta Transportation Institute and Colorado Railroad Museum. The successful event drew over 150 participants from around the world.

These are just a few of the ways that Operation Lifesaver, Inc. continues in our role as a force multiplier, leveraging crucial federal funds in states across the U.S. for greater impact. Together with our rail safety partners, Operation Lifesaver is making a difference in communities across the nation.

Thank you for your interest in Operation Lifesaver and its critical rail safety education mission. I would be happy to answer any additional questions the Subcommittee has about Operation Lifesaver Inc. and state Operation Lifesaver programs.

Sincerely,

RACHEL MALEH,
Executive Director, Operation Lifesaver, Inc.

APPENDIX

QUESTIONS FROM HON. PETER A. DEFAZIO TO HON. AMIT BOSE, ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION

Question 1.a. Your testimony describes FRA's audits of conductor certification programs, borne initially from concerns that railroads were changing their longstanding approaches to training programs, and continued as a result of the Infrastructure Investment and Jobs Act requirement.

What were the changes made to the training programs that caused the initial concern?

ANSWER. FRA received reports of certain Class I railroads significantly reducing the length of training for newly certified railroad conductors. Those reports, coupled with a series of accidents involving the severe on-duty injuries of railroad conductors, led FRA to become concerned that such reductions in the length of new conductor training were being made without sufficient justification. These concerns provided the impetus for FRA to review submitted programs involving railroads that made this sudden and unanticipated change.

Question 1.b. For the audits of the Class I railroads' conductor or engineer certification programs that FRA has conducted so far, have any Class I's program been found not to conform with the regulations?

ANSWER. To date, FRA has found 3 written certification programs from Class I railroads (one locomotive engineer program and two conductor programs) to be in non-conformance with 49 CFR parts 240 and 242 because they lacked sufficient detail, required by FRA's regulations, to permit effective evaluation. FRA is working with the railroads involved to ensure appropriate corrective actions are implemented.

Question 2. While other safety metrics have largely plateaued in recent years, the *number* of rail yard accidents has fluctuated but the *rate* of yard accidents has increased for the calendar years 2013–2021.

Has FRA identified what may be causing this trend?

ANSWER. FRA notes that the rate of yard accidents has overall increased slightly from 2013–2021. FRA suspects this increase may be related to issues associated with railroads' implementation of Part 240 and 242 locomotive engineer and conductor certification programs and programs of operational testing and inspections under 49 CFR Part 217. FRA is currently evaluating this issue.

Question 3. Mr. Cothen's testimony describes the importance of identifying the root cause of accidents but states that derailments caused by mismanagement of in-train forces are being reported primarily under 'human factor' codes. This is true even when organizational failures—such as making up a train that has little chance of operating safely—underly the problem. He also indicated that mechanical codes are applied to derailments that are caused by improper management of in-train forces, sometimes questionably or sometimes because it's the only code available.

What actions is FRA taking to ensure root causes of accidents are properly identified and coded?

ANSWER. Accident and incident investigation is a key component of FRA's safety program. FRA is conducting a comprehensive review of its accident and incident reporting regulation (49 CFR part 225) and accompanying guidance to ensure cause codes reflect the current operating conditions. This effort will include reviewing and updating mechanical and human factor cause codes. In the meantime, FRA has modified its accident/incident investigation procedures to, when appropriate, require a more detailed analysis into the root cause(s) and contributing factors of certain accidents and incidents.

Question 4. Mr. Cothen's testimony identifies recurring risks leading to preventable accidents and states that countervailing pressures are necessary to correct

course. He posits that your agency must take a more active role in overseeing the railroads' management of in-train forces.

What actions is your agency taking to require the railroads to correct the organizational failures contributing to these preventable risks and accidents?

ANSWER. FRA recognizes that where cars of different types and weights are placed within a train impacts the in-train forces experienced and that improper train make up may lead to an accident. Outside of the Pipeline and Hazardous Material Safety Administration's train placement regulation (49 CFR § 174.85), there is no Federal regulation governing train make-up, but the rail industry's use of distributed power (i.e., the practice of placing locomotives part way through and/or at a train's rear) has significantly reduced the occurrence of derailments from excessive in-train forces. However, FRA continues to study train make up as it relates to train length. As part of the study of freight trains longer than 7,500 feet the Infrastructure Investment and Jobs Act (IIJA) requires, FRA will continue to evaluate the impact of train makeup on rail safety and take any action necessary to ensure proper management of in-train forces.

At the same time, FRA and industry are just beginning to implement FRA's Risk Reduction Program (RRP) rule. RRP is a comprehensive, system-oriented approach to safety that determines a railroad operation's level of risk by identifying and analyzing applicable hazards, and involves developing plans to mitigate, if not eliminate, that risk. Additionally, recognizing that systemwide organizational factors can either create or control safety risks, consistent with the mandate of the IIJA, FRA has initiated a program of system-wide audits on certain railroads. During an audit, FRA personnel from all safety disciplines examine multiple aspects of the railroad and its operations at the same time, exchanging information on an ongoing basis. By leveraging information gathered in early stages to target subsequent audit activities, FRA focuses on organizational factors that might not otherwise come to light.

Question 5.a. In 2021, FRA initiated a program of comprehensive system-wide safety audits of Class I railroads. Regular oversight is a necessary and basic responsibility of any safety regulator. I applaud you for this work. Once the audit is complete, correcting any identified deficiency is critical to making the audit effective.

After completing these audits, how is FRA putting the findings to good use?

ANSWER. Once the system audit is completed, FRA meets with the audited railroad to discuss what corrective actions or mitigating measures the railroad plans to take in response to the audit findings. Depending on the circumstances, FRA may also take enforcement action for any identified conditions not in compliance with Federal regulations. FRA then monitors the railroad's progress implementing any identified corrective actions or mitigating measures through data analysis, inspections, periodic meetings, or other methods to assess the degree to which the railroad has successfully mitigated the causes of any adverse audit findings. In one instance, for example, FRA found that some aspects of a railroad's Critical Incident Stress Plan, which provides support to employees exposed to traumatic accidents, were not effective. The railroad proposed to make changes in response to the FRA audit recommendations, and FRA meets with the railroad on a periodic basis to ensure the railroad continues to make progress. FRA will continue to monitor accident/incident data and employee complaints and engage with other stakeholders (including railroad employees and labor organizations) to evaluate the effectiveness of the corrective actions and mitigating measures taken.

Question 5.b. Does FRA review whether the carriers comply with their own train marshalling rules?

ANSWER. If FRA finds that the placement of cars in a train may have been a causal factor in an accident or incident, FRA will evaluate the make-up of the train from a train marshalling perspective. FRA recognizes that where cars of different types and weights are placed within a train impacts the in-train forces experienced and that improper train make up may lead to an accident. Outside of the Pipeline and Hazardous Material Safety Administration's train placement regulation (49 CFR § 174.85), there is no Federal regulation governing train make-up, but the rail industry's use of distributed power (i.e., the practice of placing locomotives part way through and/or at a train's rear) has significantly reduced the occurrence of derailments from excessive in-train forces. However, FRA continues to study train make up as it relates to train length. As part of the study of freight trains longer than 7,500 feet the Infrastructure Investment and Jobs Act (IIJA) requires, FRA will continue to evaluate the impact of train makeup, including railroads' own marshalling rules, on safety.

QUESTIONS FROM HON. ELEANOR HOLMES NORTON TO HON. AMIT BOSE, ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION

Question 1.a. Administrator Bose, many residents of the District of Columbia have been negatively affected by train noise and vibration near their homes.

What is the Federal Railroad Administration's (FRA) authority to regulate train noise and vibration, and what steps has FRA taken to reduce or mitigate train noise and vibration near homes?

ANSWER. The Environmental Protection Agency (EPA) has primary responsibility for setting noise emission standards for non-high speed trains under the Noise Control Act of 1972 (42 U.S.C. § 4901 et seq.). In the 1970s, EPA established a noise emissions standard for railroad operations, including moving and stationary locomotives and car coupling operations. Under the Noise Control Act, FRA has the primary responsibility to enforce these EPA noise emissions standards and may take measurements when aware of a specific issue. *See* 49 CFR part 210.

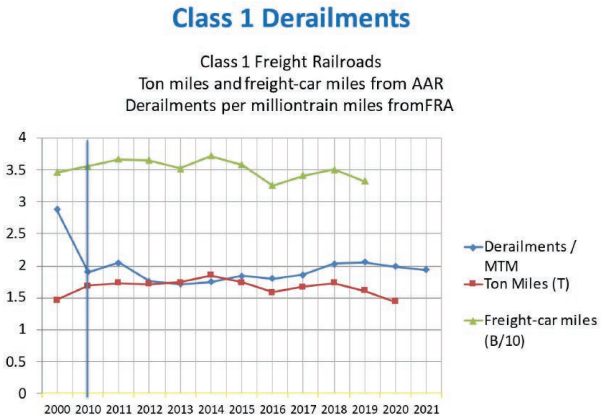
The Infrastructure Investment and Jobs Act authorizes the Secretary of Transportation, in consultation with EPA, to prescribe regulations governing railroad-related noise emissions for trains operating on the general railroad system at speeds greater than 160 miles per hour (high speed train noise emissions). FRA and EPA are currently coordinating to develop appropriate regulations.

Generally, there are no federal regulations for vibrations caused by railroads that affect communities. However, noise and vibrations from train operations may indicate a railroad safety mechanical or structural issue that FRA can address, such as a broken rail. Further, when providing funds for railroad projects, FRA also assesses the potential for noise and vibration impacts as part of compliance with the National Environmental Policy Act.

Question 1.b. What are the most cost-effective methods to reduce or mitigate train noise and vibration near homes, and does the FRA have the authority to require railroads to implement such methods?

ANSWER. There are various forms of noise and vibration mitigation methods (e.g., source controls, path controls, and receiver controls). A source control method essentially modifies the source of the noise (e.g., the equipment), while a path control method generally involves the use of a sound barrier, and a receiver control method usually involves building insulation. What method of mitigation is effective and cost-effective in any particular circumstance would involve extensive study, analysis, and engineering. Outside of regulating certain aspects of train horn noise (49 CFR Part 222), as noted above, FRA's authority as related to noise and vibrations from railroad operations is limited to enforcing EPA noise emissions standards; FRA has no authority to require railroads to implement specific noise control methods.

QUESTIONS FROM HON. SETH MOULTON TO HON. AMIT BOSE, ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION



Question 1.a. From 2000 to the mid-2010s, per the above graphic, the derailments per million train-miles dropped, from around ~2.9 to ~1.75. But that progress largely leveled off and beginning in 2016, we saw year-over-year *increases* in the rate of train derailments per million train-miles through 2019. According to this data, for

2021, we sit at ~2, still above the 2013 low. Coincident with this increase are massive slashes in workforce by Class I's: between 2015 and 2021, total workforce declined nearly one third. Putting these two statistics together, we can see that rate of train derailments increased at exactly the same moment Class I's began cutting their workforce.

What effect has precision scheduled railroading (PSR) had on the number of workers employed by the Class I railroads?

ANSWER. PSR refers to the concepts documented in the 2005 book written by E Hunter Harrison titled "How We Work and Why: Running a Precision Railroad." FRA is aware of the management concepts depicted in this book and that some Class I railroads have implemented some of the concepts. It is important to note that based on FRA's observations, each railroad has implemented PSR in different ways. But FRA has not conducted any formal analysis to determine which railroads adopted each assortment of PSR concepts and to what degree each management concept was executed.

FRA has, based on feedback from our field staff, monitored the operating changes implemented by railroads and any resulting compliance issues with our regulations. These operational changes have included reductions in workforce (staff and supervisors), closing/consolidation of yards, reductions in locomotive fleet size, and changes to operations to minimize the idle time of railroad assets, including longer trains.

It should be noted that FRA regulations do not limit railroads making the above operational changes, but our regulations require railroads to adequately train staff to ensure tasks are performed safely.

- For example, FRA's engineer and conductor certification regulations (240/242) are performance regulations that require railroads to provide extensive classroom and on the job training, in order to ensure staff are able to safety perform their safety critical tasks. These performance regulations also require supervisor monitoring of the execution of these tasks.
- PSR operational changes, such as reduction in workforce (including reduction in the number of supervisors) and longer trains (which requires additional training on in-train-forces), may require adjustments to training courses to maintain the quality of training provided by railroads to their employees. In some cases, FRA has observed inadequate training and has taken appropriate action.

FRA has observed that the PSR changes are usually implemented very quickly, and in some cases, these operational changes have not been managed adequately. In these cases, a short term up-tick in safety incidents has been observed, none of which have been serious incidents. FRA has routinely addressed these incidents through its program of focused inspections and enforcement.

FRA has provided the above information and details to the U.S. Government Accountability Office as they perform a study on PSR requested in May 2021 by T&I Chair DeFazio and T&I Rail and Pipelines Subcommittee Chair Payne.

FRA has analyzed, by craft, available railroad industry employment data (the Surface Transportation Board collects and maintains this data). Although, FRA has not directly analyzed the effect PSR has had on the number of workers employed by the Class I railroads, STB's data indicates that a marked reduction in employment numbers correlates with the COVID–19 pandemic. Accordingly, we cannot say for certain that the current employment numbers can only be attributed to PSR.

Question 1.b. PSR is based on the preeminence of lowering operating ratios. Railroads have made it clear that they are responding to shareholder pressure in implementing it. How are today's Class I's balancing safety, customer service, and stock performance?

ANSWER. PSR encompasses many aspects of safety and operations, and is designed with railroads' goals of optimization and efficiency in operation. FRA's mission is safety. As such, FRA is concerned with any potential safety impacts of PSR, and accordingly, FRA has conducted an analysis of the operational and process changes that seem to have resulted from railroad's implementation of PSR, as detailed in the previous question.

FRA's analysis, as referenced above, included a detailed review of safety data over the last ten (10) years for Class I freight railroads. Although this analysis did not identify any long-term impact on safety within the timeframe of railroad's reported implementation of PSR, the analysis did indicate that there may be short-term safety issues, such as:

- Changes in yard operations, from hump yards to flat switching, has resulted in an increase in incidents; and

- Changes in rules relating to mounting and exiting equipment while moving also resulted in an increase in injuries.

In response to these findings, FRA initiated a series of focused inspections to identify safety issues and engage with railroads to address these safety issues. FRA is also performing system level audits of railroads, which includes a detailed review of safety incidents and accidents.

FRA also notes that the reduction in fleet size that seems to be a result of PSR has led to the retirement of older mechanical equipment as part of operational optimization.

Question 1.c. PSR includes the operation of longer and heavier trains, so even holding steady on derailments per million train-miles could result in more disruptive and devastating derailments. What are Class I railroads doing to mitigate derailments and the effects of those derailments on the surrounding communities?

ANSWER. All railroads, including Class I railroads, must comply with all applicable rail safety regulations. Class I railroads have successfully implemented positive train control (PTC), as mandated by statute, and many Class I railroads are also undertaking voluntary efforts to upgrade their PTC and other train control systems to provide additional functionality not required by statute. In addition to the safety benefits of PTC, the significant improvements in railroad communications required by PTC also benefits, in some locations, the communications between a locomotive and a train's end of train device that is used to acuate the brakes from the rear of the train.

Class I railroads also work with local governments and first responders to share information, train, and prepare for rail emergencies. For example, the rail industry maintains the AskRail app that provides first responders with immediate access to data about what type of hazardous material is being transported in particular railcars so responders can make informed decisions about emergency response, should an accident occur.

QUESTIONS FROM HON. DINA TITUS TO HON. AMIT BOSE, ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION

Question 1.a. In Ms. Sanborn's testimony, she expresses displeasure that the FRA denied her railroad's request for a waiver to reduce the frequency of manual inspections where Automated Track Geometry Measurement Systems (ATGMS) is in use.

Do the current regulations prohibit the use of ATGMS?

ANSWER. No. Current regulations do not prohibit or limit a railroad's use of ATGMS or any other emerging inspection technology, as long as it can run in conjunction with current regulations. Current regulations prohibit railroads from decreasing visual track inspections below the minimum of FRA's track safety standards regardless of their use of ATGMS or any other track inspection technology.

Question 1.b. Is there anything standing in the way of the railroads increasing the frequency with which they inspect tracks using ATGMS?

ANSWER. From a regulatory perspective, no, there is nothing standing in the way of the railroads increasing the frequency with which they inspect tracks using ATGMS or any other inspection technology. However, ATGMS cannot replace the visual inspections required by FRA's regulations. FRA's track safety standards are the minimum safety requirements, but railroads may adopt higher standards of inspection and maintenance.

QUESTIONS FROM HON. BRIAN K. FITZPATRICK TO HON. AMIT BOSE, ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION

Question 1. Last December, the Biden Administration announced its Trucking Action Plan to help that industry remedy its workforce shortage and address the supply chain crisis. Similar shortages in the rail industry are actively endangering and overburdening already fatigued crews.

What, if any, specific steps are the Administration or the FRA taking to address the rail workforce shortfall?

ANSWER. As Administrator Bose indicated in his recent Congressional testimony, FRA has renewed its focus on the development of the rail industry workforce. FRA believes that with the IIJA's unprecedented investment into our Nation's rail infrastructure, as well as support for continued innovation and technological advancements, it is critical to ensure the industry's workforce is properly educated and trained. Examples of FRA's actions include the publication of draft guidance for grantees to ensure industry employee jobs are adequately protected from potential adverse impacts of federally funded projects. In addition, FRA's 2023 budget request

outlines an FRA initiative to establish a Railroad Workforce Development program with dedicated funding within the Consolidated Rail Infrastructure and Safety Improvements program.

Question 2. In my district there are two frequently blocked rail crossings (Bellevue and Woodbourne) that pose a danger to public safety, cut off our communities from vital commercial services, and severely impact our first responders' ability to respond to emergencies. Collecting data on these interruptions is critical to preventing them.

Has the FRA experienced any difficulty or delays in establishing the Blocked Crossing Portal authorized by the Infrastructure Investment and Jobs Act?

ANSWER. To date, FRA has not experienced any difficulties or delays in establishing the Blocked Crossing Portal authorized by the IIJA. The portal went live in late 2019, prior to the passage of the IIJA, and as the IIJA requires, FRA is currently working to modify the portal to collect data regarding the causes of blocked crossings. This modification requires approval of the Office of Management and Budget under the Paperwork Reduction Act (PRA). Accordingly, FRA published the required PRA public notices on April 1, 2022, and July 11, 2022 (87 FR 19176; 87 FR 41166). Before OMB can take action on the modification, they must accept and consider public comment for thirty days after the second Federal Register notice is published. Once approved by OMB, FRA will implement the changes to the portal consistent with the IIJA. Furthermore, FRA published a Request for Information on June 14, 2022, requesting public comments on how FRA's engagement with affected parties and changes to the portal and related operations can improve the effectiveness of the portal.

QUESTION FROM HON. PETER A. DEFAZIO TO HON. THOMAS B. CHAPMAN, MEMBER, NATIONAL TRANSPORTATION SAFETY BOARD

Question 1. All seven of the Class I railroads have implemented some form of precision scheduled railroading (PSR), which focuses on driving profits to shareholders by reducing expenses such as important capital assets and workers. By the end of 2021, the Class I railroads (excluding Amtrak) cut the average size of their workforce by nearly one-third compared to the average total in 2015, according to employment data they report to the Surface Transportation Board.

During the September 2020 NTSB Board Meeting on the 2019 collision of two CSX freight trains in Carey, Ohio, was there discussion about safety impacts caused by the cuts to CSX's workforce?

ANSWER. The NTSB determined the probable cause of the Carey, Ohio, collision was the failure of the striking train's engineer to respond to the signal indications requiring him to slow and stop the train because of his impairment due to the effects of alcohol. Contributing to the collision was the design of the positive train control (PTC) system, which allowed continued operation in restricted mode on the main track.

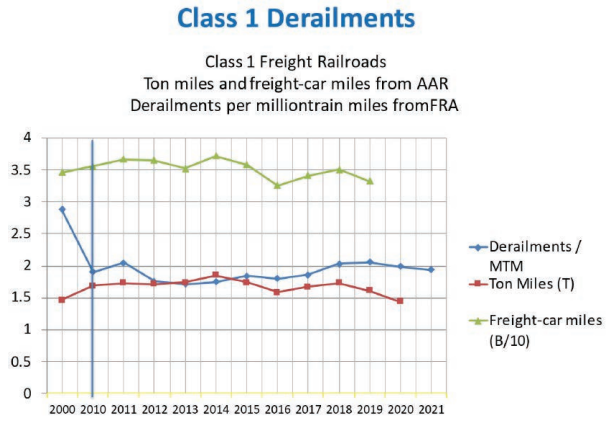
Among the conclusions from the investigation, we found that CSX Transportation's drug- and alcohol-testing programs, the shortcomings of which were also documented in the Federal Railroad Administration's (FRA's) audits of the programs, failed to deter the striking train engineer's illegal use of marijuana and consumption of alcohol, which impaired his performance while on duty and operating the train. Specifically, the striking engineer had not been randomly tested for drugs since 2009. In a May 2019 audit, the FRA indicated concern that, overall, CSX's alcohol- and drug-testing program was not functioning at an acceptable level of compliance and efficiency. FRA auditors observed numerous instances where CSX field managers were unavailable to schedule testing or did not schedule testing to ensure that random selections were completed.

In addition, we found that CSX Transportation's PTC training program did not include particular emphasis on using restricted mode specific to its limitations enforcing restrictive signal aspects, encroachment into an established work zone, and movement through an improperly lined switch. Adequate training and managerial oversight are essential for ensuring that rules and procedures for safely operating PTC systems in restricted mode are followed correctly.

During the Board meeting to consider the Carey report, then-Member and now NTSB Chair Jennifer Homendy asked the investigator-in-charge and the group chairman of operating practices, another investigator, if precision scheduled railroading (PSR) had an impact on safety. The investigator stated that PSR did have an impact on safety, specifically citing training concerns given cuts in the number of CSX road foreperson positions, because these employees might have provided feedback on whether the PTC training program was effective and working correctly.

In addition, Member Homendy cited a phone conversation that she and staff from the NTSB's Office of Railroad, Pipeline, and Hazardous Materials Investigations had with the FRA that indicated that workforce cuts at CSX had resulted in lack of follow-up on scheduling random drug testing because CSX was sending scheduling emails to people that were no longer with the railroad.

QUESTIONS FROM HON. SETH MOULTON TO HON. THOMAS B. CHAPMAN, MEMBER, NATIONAL TRANSPORTATION SAFETY BOARD



Question 1.a. From 2000 to the mid-2010s, per the above graphic, the derailments per million train-miles dropped, from around ~2.9 to ~1.75. But that progress largely leveled off and beginning in 2016, we saw year-over-year *increases* in the rate of train derailments per million train-miles through 2019. According to this data, for 2021, we sit at ~2, still above the 2013 low. Coincident with this increase are massive slashes in workforce by Class I's: between 2015 and 2021, total workforce declined nearly one third. Putting these two statistics together, we can see that rate of train derailments increased at exactly the same moment Class I's began cutting their workforce.

What effect has precision scheduled railroading (PSR) had on the number of workers employed by the Class I railroads?

Question 1.b. PSR is based on the preeminence of lowering operating ratios. Railroads have made it clear that they are responding to shareholder pressure in implementing it. How are today's Class I's balancing safety, customer service, and stock performance?

Question 1.c. PSR includes the operation of longer and heavier trains, so even holding steady on derailments per million train-miles could result in more disruptive and devastating derailments. What are Class I railroads doing to mitigate derailments and the effects of those derailments on the surrounding communities?

ANSWERS to Questions 1.a., 1.b., & 1.c. These are thoughtful questions; however, we at NTSB do not consider ourselves well-positioned to offer responses. As the federal agency tasked with determining the probable cause of significant transportation accidents, our focus is on the investigatory process and the factors contributing to specific and often tragic events. With respect to identifying or responding to broader industry trends, we defer to the FRA as the regulator. Some elements of these questions might also be addressed to the operators themselves.

QUESTION FROM HON. DINA TITUS TO HON. THOMAS B. CHAPMAN, MEMBER, NATIONAL TRANSPORTATION SAFETY BOARD

Question 1. Your Safety Recommendation report following the Fort Worth, Texas, and Draffin, Kentucky, derailments mentions that cars positioned at the rear of a train have a lower probability of being derailed which also lowers the probability of releasing hazardous materials in the unfortunate event of a derailment.

Has the NTSB considered making recommendations to the FRA or PHMSA regarding the positioning of cars carrying hazardous materials?

ANSWER. As a result of those investigations referenced in your question, we recommended that the Association of American Railroads (AAR), the American Short

Line and Regional Railroad Association (ASLRRA), and the Renewable Fuels Association (RFA) develop and adopt guidelines and recommended practices for the systematic placement of the most vulnerable tank cars in high-hazard flammable trains, such as unmodified US Department of Transportation-111 tank cars, in positions of trains where they are least likely to derail or to sustain mechanical damage from the effects of trailing tonnage or collision in an accident (Safety Recommendation R–20–27). ASLRRA and the RFA have implemented the recommendation, but it remains classified "Open—Unacceptable Response" to the AAR.

Previously, we had recommended that the Pipeline and Hazardous Materials Safety Administration (PHMSA) evaluate the risks posed to train crews by hazardous materials transported by rail, determine the adequate separation distance between hazardous materials cars and occupied cars to ensure train crews are protected during both normal operations and accident conditions, and collaborate with the FRA to revise the regulations to reflect those findings (Safety Recommendation R–17–1). That recommendation is currently classified "Open—Acceptable Response," as PHMSA has initiated a research project in coordination with the John A. Volpe National Transportation Systems Center to address the issue. We understand that the Volpe Center is in the process of finalizing a report. In the meantime, we recommended that PHMSA require that all trains have a minimum of five buffer cars between any crew-occupied equipment and cars carrying hazardous materials, regardless of train length and consist (Safety Recommendation R–17–2). PHMSA has responded that it does not plan to take this interim action, and the recommendation is classified "Open—Unacceptable Response."

QUESTIONS FROM HON. DONALD M. PAYNE, JR. TO ROY L. MORRISON III, DIRECTOR OF SAFETY, BROTHERHOOD OF MAINTENANCE OF WAY EMPLOYES DIVISION, INTERNATIONAL BROTHERHOOD OF TEAMSTERS

Question 1. Your testimony states that visual inspections conducted by human track inspectors can identify track defects than cannot be identified by autonomous track geometry measurement systems.

Have your members identified defects that were missed by automated track inspection technology inspecting the same track? If so, can you share an example?

ANSWER. BMWED has been collecting this information for several years to be used in different settings. To provide the most comprehensive answer, all the responses we have gathered have been provided.

Section 1—Track inspection survey conducted from July 13, 2022, to July 18, 2022

Section 2—Track inspectors' declarations used in BNSF Lawsuit

Section 3—Track Inspector Statements

This report is the most complete and up-to-date collection of this data.

[Editor's note: The 106-page report is retained in committee files.]

QUESTIONS FROM HON. DINA TITUS TO ROY L. MORRISON III, DIRECTOR OF SAFETY, BROTHERHOOD OF MAINTENANCE OF WAY EMPLOYES DIVISION, INTERNATIONAL BROTHERHOOD OF TEAMSTERS

Question 1.a. With the rail workforce having been cut by one-third in recent years, it gives me pause that railroads are requesting waivers from the FRA to reduce manual track inspections.

Are there track defects that cannot be identified by Automated Track Geometry Measurement Systems (ATGMS) or other automated track inspections (ATI) technologies?

ANSWER. BMWED has broken this answer into two parts.

Section 1—Is a table created by BMWED using 49 CFR Part 213 Track Safety Standards Defect Codes Subpart A to F.

Section 2—Is real examples of FRA-reported Accidents from 2016–September 2021. Using the same defect codes, BMWED broke the real work FRA-reported accidents into those that ATI/ATGMS can detect and those it does not.

Section 1:
Key: Y=Inspected for N=Not inspected for

	FRA Defects	Human Visual	ATI
Sub Part B	Roadbed		
	213.33—Drainage	Y	N
	213.37—Vegetation	Y	N
Sub Part C	Track Geometry		
	213.53—Gauge	Y	Y
	213.57—Curves, Elevations, and speed limitations	Y	Y
	213.55—Track alinement	Y	Y
	213.59—Elevation of curved track; runoff	Y	Y
	213.63—Track surface	Y	Y
	213.65—Combined track alinement and surface deviations	Y	Y
Sub Part D	Track Structure		
	213.103—Ballast; general	Y	N
	213.109—Crossties	Y	N
	213.113—Defective rails	Y	N
	213.115—Rail end mismatch	Y	N
	213.121—Rail joints	Y	N
	213.122—Torch cut rail	Y	N
	213.123—Tie plates	Y	N
	213.127—Rail fastening systems	Y	N
	213.133—Turnouts and track crossings generally	Y	N
	213.135—Switches	Y	N
	213.137—Frogs	Y	N
	213.139—Spring rail frogs	Y	N
	213.141—Self-guarded frogs	Y	N
	213.143—Frog guard rails and guard faces; gage	Y	N
Subpart E	Track Appliances and Track-Related Devices		
	213.205—Derails	Y	N
Non-Regulatory			
	Trespassers	Y	N
	Vandalism	Y	N
	Track Obstructions	Y	N
	Right of Way	Y	N

Table data consistent with industry raw data available in the Federal Register under ATI test raw data.

Editor's note: The color-coded key in the original document has been adjusted to accommodate a black and white printing format.

Non-Geo Detectable Track Caused Accident 2016–09/2021

Specific causes:	Total		Type of			Reportable		Casualt	
	Cnt	%	Coll	Der	Othr	Amount	%	Kld	Nonf
T002—Washout/rain/slide/etc. dmg—track	30	1.1	-	28	2	24,519,482	4.6	0	8
T099—Other roadbed defects	9	0.3	1	8	-	1,234,563	0.2	0	1
T104—Disturbed ballast section	1	0	-	1	-	905,230	0.2	0	0
T105—Insufficient ballast section	4	0.1	-	4	-	2,993,059	0.6	0	1
T201—Bolt hole crack or break	33	1.2	-	33	-	12,407,169	2.4	0	0
T202—Broken base of rail	90	3.3	-	90	-	24,838,850	4.7	0	0
T203—Broken weld (plant)	4	1	-	4	-	818,221	0.2	0	0
T204—Broken weld (field)	21	0.8	-	21	-	15,327,381	2.9	0	6
T205—Defective or missing crossties	60	2.2	-	60	-	6,512,483	1.2	0	0
T206—Defect/missing spike—oth rail fastener	51	1.8	-	51	-	4,631,020	0.9	0	0
T207—Detail fracture—shelling/head check	261	9.5	1	258	2	69,816,123	13.2	0	2
T208—Engine burn fracture	4	0.1	-	4	-	1,549,268	0.3	0	0
T210—Head and web sep (outside jt bar limit)	98	3.6	-	97	1	14,351,128	2.7	0	1
T211—Head & web separation—in jt bar limit	14	0.5	-	14	-	3,412,978	0.6	0	0
T212—Horizontal split head	27	1	-	27	-	2,948,232	0.6	0	0
T213—Joint bar broken (compromise)	8	0.3	-	8	-	2,863,309	0.5	0	0
T214—Joint bar broken (insulated)	2	0.1	-	1	1	71,867	0.0	0	0
T215—Joint bar broken (noninsulated)	11	0.4	-	11	-	5,635,261	1.1	0	2
T216—Joint bolts, broken, or missing	8	0.3	-	8	-	1,247,945	0.2	0	0
T217—Mismatched rail-head contour	15	0.5	-	15	-	1,046,549	0.2	0	7
T219—Rail defect with joint bar repair	5	0.2	-	5	-	2,643,693	0.5	0	0
T220—Transverse/compound fissure	99	3.6	-	98	1	28,307,850	5.4	0	0
T221—Vertical split head	102	3.7	-	102	-	23,500,880	4.5	0	1
T222—Worn rail	17	0.6	-	17	-	2,782,656	0.5	0	0
T223—Rail Condition—Dry rail, freshly ground	2	0.1	-	2	-	31,606	0.0	0	0
T299—Other rail and joint bar defects	27	1	-	27	-	12,282,650	2.3	0	2
T301—Derail, defective	2	0.1	-	2	-	122,867	0.0	0	0
T303—Guard rail loose/broken or mislocated	16	0.6	-	16	-	685,590	0.1	0	0
T304—Railroad crossing frog, worn or broken	2	0.1	-	2	-	252,961	0.0	0	0
T305—Retarder worn, broken, malfunctioning	5	0.2	1	3	1	362,701	0.1	0	0
T306—Retarder yard skate defective	1	0	-	1	-	45,259	0.0	0	0
T307—Spring/power swtch mech. malfunction	14	0.5	-	14	-	5,577,472	1.1	0	1
T308—Stock rail worn, broken, disconnected	11	0.4	-	11	-	5,480,032	1.0	0	0
T309—Switch (hand op) stand mechanism defect	18	0.7	-	18	-	1,439,620	0.3	0	0
T310—Swtch connect/operate rod broke/defect	9	0.3	-	9	-	478,598	0.1	0	0
T311—Switch damaged or out of adjustment	81	2.9	-	81	-	4,795,983	0.9	0	0
T312—Switch lug/crank broken	6	0.2	-	6	-	1,368,739	0.3	0	0
T313—Switch out of adj. insuff. anchoring	12	0.4	-	12	-	1,166,285	0.2	0	1
T314—Switch point worn or broken	167	6.1	-	165	2	8,574,779	1.6	0	4
T315—Switch rod worn, bent, broken, etc.	8	0.3	-	8	-	2,053,332	0.4	0	0
T316—Turnout frog (rigid) worn, or broken	14	0.5	-	14	-	481,623	0.1	0	0
T317—Turnout frog (self guarded)—worn/broken	6	0.2	-	6	-	188,311	0.0	0	0
T318—Turnout frog (spring) worn, or broken	6	0.2	-	6	-	908,975	0.2	0	0
T319—Switch pt gap (btwn swt pt & stock rail)	74	2.7	1	73	-	4,913,176	0.9	0	4
T399—Oth frog, switch, trk appliance defect	44	1.6	-	42	2	8,073,381	1.5	0	1
T402—Flangeway clogged	12	0.4	-	12	-	766,565	0.1	0	0
T403—Engineering design or constructi	35	1.3	1	33	1	3,804,717	0.7	0	0
T404—Catenary system defect	80	2.9	-	-	80	2,824,359	0.5	2	2
T499—Other way and structure defect	17	0.6	-	9	8	3,284,047	0.6	0	0
Total	1643	.....	5	1537	101	324,328,825	.....	2	44
Average	.....	1.2	.....	.....	.....	.....	1.2	.....	.....

Geo Detectable Track Caused Accident 2016–09/2021

Specific causes:	Total		Type of Accident			Reportable Damage		Casualt	
	Cnt	%	Coll	Der	Othr	Amount	%	Kld	Nonf
T001—Roadbed settled or soft	106	3.8	1	105	-	38,503,433	7.3	0	1
T101—Cross level of track irregular (joints)	54	2.0	-	54	-	5,213,418	1.0	0	0
T102—Cross level track irreg. (not at joints)	73	2.6	-	72	1	15,652,469	3.0	0	1
T103—Deviate frm uniform top of rail profile	23	0.8	-	22	1	1,462,142	0.3	0	0
T106—Superelevation improper, excessive, etc.	22	0.8	-	21	1	3,689,249	0.7	0	0
T107—Superelevation runoff improper	5	0.2	-	5	-	200,027	0.0	0	0
T108—Trk alignmnt irreg—not buckled/sunkink	54	2.0	-	54	-	25,232,743	4.8	0	0
T109—Track alignment irreg (buckled/sunkink)	78	2.8	-	78	-	47,787,616	9.1	0	10
T110—Wide gage (defective/missing crossties)	444	16.1	-	443	1	34,680,276	6.6	0	1
T111—Wide gage (spikes/other rail fasteners)	142	5.2	1	140	1	17,198,157	3.3	0	0
T112—Wide gage (loose, broke, etc, gage rods)	17	0.6	-	17	-	1,065,358	0.2	0	0
T113—Wide gage (due to worn rails)	43	1.6	-	43	-	3,229,801	0.6	0	7
T199—Other track geometry defects	42	1.5	-	42	-	5,750,204	1.1	0	0
T401—Bridge misalignment or failure	11	0.4	-	8	3	3,901,921	0.7	0	0
Total	1114	.....	2.0	1104	8	203,566,814	.....	0	20
Average	.....	2.9	.....	.....	.....	.....	2.8	.....	.....

Question 1.b. What safety implications may occur due to less frequent manual track inspections?

ANSWER:

AUTOMATED TRACK INSPECTION MACHINES AND HUMAN TRACK INSPECTIONS—REDUCTION IN HUMAN TRACK INSPECTIONS IS NOT NECESSARY FOR THE TESTING OR USE OF AUTOMATED TRACK INSPECTION; AND REDUCTIONS IN HUMAN INSPECTIONS ARE DANGEROUS

The Association of American Railroads (AAR) has written to the Federal Railroad Administration (FRA) complaining that the FRA has not renewed or extended waivers and test programs that utilize automated track inspection machines. AAR implies that the FRA is somehow impeding the railroads' use of this technology and somehow depriving them of the ability to operate this equipment. *The railroads do not need waivers or suspensions of regulations to test or use the track inspection machines*.

No current regulation prohibits the use of such equipment. The waivers and suspensions of regulations sought by the railroads concern the frequency of human track inspections that are required to ensure track safety. The waivers and suspensions allow the railroads to reduce human track inspections and to substitute machine inspections for human inspections. *While the machines can augment the work of human track inspectors, they are not a substitute for inspections performed by a person; and replacing these inspections with machine inspections makes the railroads less safe, not safer*.

The Track Safety Standards (TSS) "prescribe minimum safety requirements for railroad track that is part of the general railroad system of transportation." The regulation at 49 CFR 213.233 mandates specific minimum frequencies of human visual track inspections depending on the track type. The regulation also requires *immediate* remediation of track defects, which track inspectors can do, but not by machines. Reduction of the regulatorily required human railroad infrastructure inspections was not and is not "necessary" to increase the use of any automated track inspection (ATI) technology. There is nothing about the use of the automated equipment that precludes continued human visual inspections required in §213.233. ATI technology is not new. Most if not all of the American Class 1 railroads (referred to as *Industry* from this point forward) have been using some form of this technology since the 1970s. This technology has *supplemented* human track inspections for decades. But there is no technology currently available to inspect for all the defects the FRA Track Safety Standards require that a human inspector inspects.

TSS regulation Section 49 CFR 213.233 requires that railroad track inspections must be performed by a person who is designated as qualified to perform track inspections under 49 CFR 213.7, which, in turn, requires that the person must demonstrate that he or she knows and understands all requirements of Section 213.7 that apply to the inspection of the track for which he or she is responsible. Track Inspectors must be able to detect deviations from those requirements and to pre-

scribe and take appropriate and immediate remedial actions to correct or safely compensate for deviations from TSS requirements. 49 CFR 213.233.

Under 213.233, the following items need to be inspected to perform adequate track inspections: Roadbed (drainage and vegetation); Track Geometry (track gauge, track alignment, curves; elevation and speed limitations); Track Surface (combined track alignment and surface deviations); Track Structure (ballast, crossties, defective rails, rail end mismatch, continuous welded rail, rail joints, tie plates, rail fastening systems, switches, and derails); Automotive or Railroad crossings at grade; and Right of way (trespassers, suspicious items, vandalism). A qualified Track Inspector is expected to look simultaneously for all these sorts of track defects and to consider whether deviations or deformities in these categories that might not constitute defects on their own together include conditions that require corrections.

It is important to note that although all the defects discovered using ATI can be found by a §213.7 Qualified Human Track Inspector using long-established visual track inspection techniques. Only approximately a quarter of all §213 track defects found by Track Inspectors are detected by using an ATI inspection system.

BMWED agrees that ATI improves *track geometry* defect detection through means and methods that have far better reliability and accuracy than human in-person visual inspections conducted by a person walking or hi-railing track. Track geometry defects, particularly changes in gauge, are one of the leading track causes of derailment in the US. But, as we have explained, they are not the only types of track and right-of-way defects that the railroads must use for screening. And while a Track Inspector can immediately remedy some track defects, call in local maintenance of way forces to repair a defect, or place a "slow order" on a track defect, use of a machine that reports data to a remote location where it will be reviewed with a Track Inspector later sent to check on the reported defect does not result in *immediate* remediation of the defect. Therefore, the industry should voluntarily adopt a higher ATI frequency than currently required while maintaining TSS human visual frequency of inspection requirements. BMWED also feels FRA should clearly state that increased ATI frequencies are to supplement, not replace, the TSS human visual inspection frequencies.

U.S. railroads play a vital role in our nation's economy, and it is crucial to keep that rail system moving safely. BMWED recognizes the need for safe and reliable railroad infrastructure. We look forward to working with FRA/DOT and the industry to find safe ways to improve the inspection of our nation's railroad infrastructure.

QUESTIONS FROM HON. PETER A. DEFAZIO TO GRADY C. COTHEN, JR., RETIRED, TRANSPORTATION POLICY CONSULTANT

Question 1. Your whitepaper reviews a host of accidents, both minor and fatal derailments; involving extremely heavy and long trains and trains that are less heavy and long. You make a compelling case that there are common, recurring issues leading to accidents.

As someone who spent decades at FRA working on rail safety, why are you concerned by what you perceive as the Class I railroads' regression of management of in-train forces?

ANSWER. The safety implications of this practice are, of course, considerable. We risk a catastrophic accident involving release of hazardous materials, among other scenarios reflected in the White Paper provided to the Committee. Even the wreck clearance operations are inherently dangerous for workers and disruptive to communities.

However, I believe the underlying concern is even more serious. It appears that the major railroads are willing to undertake operations that they know to be unnecessarily problematic for short-term gain. With that said, the possibility presents itself that the entire march toward safer and more productive rail transportation, which began with the reforms of the late 1970s and the Staggers Rail Act of 1980, could be reversed.

The Nation needs the railroads to grow markets, not shed traffic or "collar" cars. Shippers need the railroads to tailor service to individual markets, as much as practical, not just put everything on a virtual conveyor belt and hope for the best. Employees, both officers and rank and file, need to know there is a future in this industry so they will stay in their posts and do their best.

Railroads need to invest in their future, maintaining a state of good repair and preparing their people, equipment and facilities for the future. That future should not be a slimmed down network with long trains lumbering through newly extended sidings that claimed capital better spent elsewhere.

Question 2.a. During the hearing, Ms. Sanborn, representing Norfolk Southern Corporation and AAR's Safety and Operations Management Committee, stated that

technologies have been developed that benefit the handling of longer trains, citing the use of distributed power as well as energy management systems, which she described as "basically cruise control systems that operate the train with an eye towards managing in-train forces as well as speed and fuel efficiency."

Are the Class Is railroads adhering to principles governing the proper assignment or placement of locomotives in a train?

ANSWER. In the past several years there appear to have been numerous instances of long and heavy trains operated without locomotives placed properly in train (distributed power locomotives or DPUs). This may not have been intended by the operations plan, but it clearly happens.

Question 2.b. Do you have concerns related to the use of, or reliance on, the train energy management systems that Ms. Sanborn described as capable of managing in-train forces?

ANSWER. Train energy management systems have a very legitimate role in guiding the use of motive power and dynamic (locomotive only) braking to achieve reductions in fuel consumed (and emissions). Used with Positive Train Control technology and advanced dispatch systems, these systems can achieve "train pacing" that may further reduce fuel consumption and emissions while distributing traffic efficiently over the network. The Federal Railroad Administration was an early research sponsor of one of the major energy management systems.

However, when use of train brakes ("air" or "power" brakes) becomes necessary, because of significant grades or undulating territory, these systems are generally considered ineffective and, by rule or through practice, are generally cut out. The problems arise when the systems are relied upon inappropriately or to such an extent that crews might become "de-skilled" in the management of in-train forces. Longer and heavier trains make use of these systems more attractive but also more difficult, particularly due to the vagaries of data radio links among the locomotives in the train.

Suppliers and the railroads have ambitions to blend dynamic and train braking under the control of train energy management systems. This has been tested under ideal conditions but in my judgment will prove very unreliable absent the adoption of electronically controlled pneumatic brakes.

Question 3.a. You testified that derailments caused by poor management of in-train forces are being reported primarily under "human factor" codes, with the implication that the employee made a mistake. You stated that, for the most part, these actually are organizational accidents driven by management decisions. You also stated that other accidents involving management of in-train forces are being reported as equipment-related failures, but that many of such failures result from excessive buff and draft forces in poorly assembled trains.

Please describe the importance of correctly capturing reportable events.

ANSWER. If we can't measure a problem, we can't determine the nature or scope of the problem or fashion an efficient remedy. One of the issues with any response to the current problems will be an evaluation of benefits and costs. In the safety arena, the first benefits we look for are the accidents and casualties avoided. There are often other benefits, of course, such as avoidance of negative "externalities," but that is where we start.

Question 3.b. What can FRA, NTSB, and the railroads do to better ensure the root cause of accidents/incidents involving in-train forces are identified?

ANSWER. Many of the problems with current reporting are simply gross factual errors, evident from the conflicts in the reported data. My understanding is that FRA is already beginning to work on that problem.

A second concern is the absence of "cause codes" and supplementary narrative requirements that clearly reflect the specific nature of failures in the functioning of new technology and practices. The FRA has the Railroad Safety Advisory Committee (RSAC) as an available tool to update the reporting system. The RSAC has taken on tasks related to the Railroad Accident/Incident Reporting System in recent years, but to the best of my knowledge not focusing on management of in-train forces.

I am concerned that the NTSB still seems not to understand the genesis of some of the problems we are seeing in the accident data. The Board staff is dominated by aviation personnel who are schooled in safety management. However, the assumptions underlying safety management systems include a belief that a positive safety culture will free up the flow of information and insights required to mitigate risks. We have seen with the 737 MAX debacle that pursuit of profit can poison the safety management process and even thwart a very advanced regulatory model. The same sort of thing appears to be happening in the railroad industry.

We can laud safety management and a positive safety culture all we want, but that then requires that we be capable of understanding that it requires safety to be the preeminent value of the enterprise. When that condition is not present, its absence is often relevant to the "underlying" cause of organizational accidents. We can adjust the "process" all we want, but the foundation is still unsound.

The NTSB does important work, but it has been absent without leave with respect to the PSR-driven issues of the past several years. Its railroad staff needs to get out of the office between major investigations, mingle with officers and employees, and take the temperature of the industry. The new NTSB Chairman should be well situated to make that happen.

Question 4. At the hearing, you stated that the immense safety progress the Class I railroads had been making has stalled and further progress has been arrested due to their commitment to precision scheduled railroading (PSR). You spoke clearly about the need for countervailing pressures in the form of safety regulations to counteract the focus of PSR on rewarding shareholders.

Do you have recommendations for such countervailing pressures?

ANSWER. My White Paper lays out detailed recommendations regarding legislative and regulatory action to address this need. The first step for FRA is to require railroads to live by their own train make-up rules. Then FRA needs to task the RSAC with writing regulations. Ideally, the regulations would be built around industry standards and capable of adjusting as technology and practices change. The agency already knows a good bit about what draft and buff forces, and lateral/vertical forces, are problematic. So, the physics should be the starting point. Both the industry and FRA have train dynamics models that can be used to test various train configurations over specific routes. They need to be used before, and not just after the accident.

The Congress will have to back up these actions with a specific statutory mandate. Absent that, the regulatory process will bog down. If the industry believes it can delay the regulatory process and use the courts to stymie necessary actions, industry may not participate constructively in the regulatory process.

Question 5. According to research by the Congressional Research Service, in 2020, the seven Class I railroads had combined debt of more than $108 billion and combined annual interest expense of nearly $5 billion.

As someone who helped the freight railroads through bankruptcies and economic deregulation, do you have concerns that the debt and annual interest expense of the Class I railroads pose a risk to the safety and vitality of the industry?

ANSWER. My "back of the envelope" looks at this question do give me concerns. It appears that much of the long-term debt taken on in recent years was used for cash distributions to investors, rather than state of good repair or investments in new capital projects. This works for a time in a period of high liquidity and very low interest rates. However, as interest rates rise to more historically common levels, refinancing and repayment could tax railroad cash flows, particularly if the railroads have failed to grow their markets in the meantime.

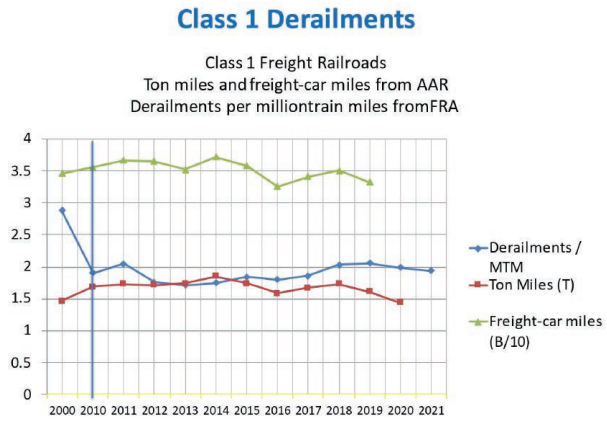
Railroads are still "affected with a public interest," a point driven home by the "Freight Rail Works" commercials and other industry statements. The worst outcome would be any future requirement for public funds to bail out the industry, with the restrictions on management discretion and innovation which that would logically entail.

I have suggested to FRA that the agency, perhaps in partnership with STB staff, conduct forward-looking financial analysis directed at this question. The analysts would need to frame "pro forma" cases positing requirements for investment in state-of-good-repair, assumptions for railroad traffic levels in various markets, fluctuations in the actual cost of capital, sufficiency of cash flow after repayment of debt obligations, and perhaps other factors. Congress and the Executive will need early warning flags to trigger action well before the situation is too far gone.

At a minimum, USDOT will need to be very careful in assuring that any Federal infrastructure spending that goes directly or indirectly to the major freight railroads is accompanied by appropriate undertakings and assurances. Major freight railroads host Amtrak and commuter service. They are required for national defense, and getting more traffic off the highway and onto the railroads will be very important as we address the climate challenge.

We should be looking for opportunities for public/private partnerships that might involve, as an example, electrification of some major freight routes. But there would be no logic in throwing public investments into the freight railroad coffers if they will just be paid out in excessive cash distributions. Money is fungible.

QUESTIONS FROM HON. SETH MOULTON TO GRADY C. COTHEN, JR., RETIRED, TRANSPORTATION POLICY CONSULTANT



Question 1.a. From 2000 to the mid-2010s, per the above graphic, the derailments per million train-miles dropped, from around ~2.9 to ~1.75. But that progress largely leveled off and beginning in 2016, we saw year-over-year *increases* in the rate of train derailments per million train-miles through 2019. According to this data, for 2021, we sit at ~2, still above the 2013 low. Coincident with this increase are massive slashes in workforce by Class I's: between 2015 and 2021, total workforce declined nearly one third. Putting these two statistics together, we can see that rate of train derailments increased at exactly the same moment Class I's began cutting their workforce.

What effect has precision scheduled railroading (PSR) had on the number of workers employed by the Class I railroads?

ANSWER. The STB keeps detailed statistics on rail employment. It seems to be generally accepted that pressure from financial markets has led to a reduction in rail employment of about a third from ~2015 forward. Some outsourcing of work has occurred, of course, but the appearance to the outside observer is that many very useful management and rank and file positions have been cut.

Question 1.b. PSR is based on the preeminence of lowering operating ratios. Railroads have made it clear that they are responding to shareholder pressure in implementing it. How are today's Class I's balancing safety, customer service, and stock performance?

ANSWER. There are many opinions on this issue among close observers, but I believe the better arguments are with those who say stock performance is clearly elevated above other factors, including future growth. It must be said that these are not decisions made by traditional railroaders, but rather by arguably "predatory" private equity that has gained footholds in the board rooms.

If poor management of in-train forces is a symptom of PSR, then PSR is a symptom of the financialization of the American economy. We see its effects all around us, of course, and yet we do not make the changes in tax policy, or securities law, or even antitrust law, that might begin to turn the proverbial battleship. It will take a long time to turn, but for the future of our economy we need to begin.

Question 1.c. PSR includes the operation of longer and heavier trains, so even holding steady on derailments per million train-miles could result in more disruptive and devastating derailments. What are Class I railroads doing to mitigate derailments and the effects of those derailments on the surrounding communities?

ANSWER. As my prepared statement reflects, railroads have worked constructively to reduce track caused accidents and certain equipment caused accidents, as well. The operational hazards are less well managed. These are events that, as much as possible, should be prevented through sound operating practices and appropriate application of technology.

Historically, railroads have been generous in providing training for emergency responders in addressing railroad accidents. Hazardous material training has been a forte for railroads and major shippers. Others would need to address the extent to which this remains true today, and to what extent.

Once an event occurs, railroads generally respond quickly to mitigate effects to the extent feasible, clean up the derailment site, compensate public entities and private parties that incur direct expenses or losses, and work with shippers and local authorities on the remediation of any environmental impacts. But secondary and tertiary losses will occur that are never reimbursed. The latter are more general "societal costs" that are difficult to quantify, as a whole.

QUESTIONS FROM HON. PETER A. DEFAZIO TO CYNTHIA M. SANBORN, EXECUTIVE VICE PRESIDENT AND CHIEF OPERATING OFFICER, NORFOLK SOUTHERN CORPORATION, AND CHAIR, SAFETY AND OPERATIONS MANAGEMENT COMMITTEE, ASSOCIATION OF AMERICAN RAILROADS

Question 1. Your written testimony states the industry is concerned that FRA will include crew scheduling issues in the scope of the Fatigue Risk Management Program rulemaking. However, the 2008 Rail Safety Improvement Act mandated that railroads consider scheduling practices for employees that reduce fatigue and cumulative sleep loss in fatigue management plans. Appropriately, this is reflected in the final rule FRA published on June 13.

Will NS and the industry comply with the statute and FRA's final rule and review scheduling practices as part of fatigue risk management programs?

ANSWER. In the area of fatigue management, as in all other areas of rail operations, railroads will act according to their obligations under the relevant statutes and regulations. That said, railroads continue to believe that the FRA should refrain from interjecting itself into this matter and instead allow railroads to continue to address scheduling as part of collective bargaining.

Norfolk Southern and other railroads want properly rested crews. It is not in a railroad's best interest to have employees who are too tired to perform their duties properly and safely. For that reason, railroads have long been reviewing how they operate—including, when practical, their scheduling systems—to keep fatigue to a minimum.

Experts agree that because factors that can result in fatigue are multiple, complex, and frequently intertwined, there is no single solution to the fatigue problem. That's why railroads work with their employees and others to find innovative, scientifically based countermeasures to fatigue-related problems. Countermeasures railroads have adopted include:

- Increasing the minimum number of hours off duty and providing more predictable calling assignments and rest opportunities between shifts, as well as devising systems (including web sites, e-mails, and automated telephone systems) to improve communication between crew callers and employees.
- Allowing employees who have been off work more than 72 hours (e.g., on vacation) to begin their first shift in the morning rather than the middle of the night.
- Encouraging confidential sleep disorder screening and treatment.
- Offering fatigue education programs for employees and their families. Education is critical, because the effectiveness of fatigue initiatives depends on the actions of employees while off duty.

Not every countermeasure is appropriate for every railroad, or even for different parts of the same railroad, because circumstances unique to each railroad influence the effectiveness and practicality of specific countermeasures.

As I noted in my testimony, scheduling is a complicated issue—circumstances are different from one railroad to the next, and between different parts of the same railroad. Many rail employees do work set schedules, such as many of those holding yard or local switching assignments. However, some rail employees, such as some train crews, work flexible schedules that vary based on a variety of factors. These include business levels, the time of the year, and the day of the week. Numerous factors, including weather conditions, track maintenance, accidents, unexpected employee illnesses, and dozens of other factors can affect a given employee's work schedule, thus impacting the time other employees will be needed.

Scheduling policies are typically an important topic within the context of collective bargaining. In many cases, collective bargaining agreements allow rail employees, especially those with the most seniority, to largely determine for themselves when and how many hours they work (subject to statutory hours of service maximums). These employees' actions, in turn, affect how many hours, and when, less senior employees work. This greatly complicates railroads' ability to schedule crew assignments.

Question 2.a. Your written testimony highlights the introduction of autonomous trucking as a major competitive change that railroads face. And you state that rail-

roads need to avail themselves of technology if they want to compete against autonomous trucking.

Has NS considered autonomous train technologies?

Question 2.b. Would NS be able to furlough more employees if autonomous train technologies are fully deployed?

ANSWER to Questions 2.a. & 2.b. Autonomous train technologies would only be considered where safety would not be compromised and where they make business sense. With an extremely complex system like Norfolk Southern's, any transition to autonomous operations will be evolutionary.

While Norfolk Southern cannot at this time predict the ultimate level of automation we may achieve, it is clear that automated technologies provide the opportunity to realize a safer railroad through error reduction and minimization of safety risks.

Indeed, technology-assisted rail operations is first and foremost about making rail operations safer. It can help reduce human error in a locomotive cab; better identify defects in track and equipment; and minimize the number of human beings in and around rail equipment—all ways to reduce accidents and injuries.

That's why it's imperative that the federal government, particularly the FRA, must be a partner with railroads to leverage the advantages of technology to improve operations and enhance safety. Today, among other things, that means permitting the industry to operate with one-person crews, which will not degrade safety and will help railroads remain competitive in the freight transportation marketplace.

Railroads will realize risk and error reduction and the attendant safety benefits even at less-than-fully autonomous levels of operation. Railroads are already implementing semi-autonomous operations with the assistance of positive train control (PTC) and are exploring a natural expansion of that investment so that safety and efficiency can be enhanced moving forward.

As technology plays increasing roles in rail operations in the future, employees will clearly continue to be necessary, but their jobs may be different in the future. Reducing the risk of human error through technology must continue to be a goal if railroads are to see further improvement in safety. Moreover, adoption of technologies will not only create a safer workplace. It will also help prevent the loss of railroad jobs that will inevitably result if railroads are not able to compete with the other transportation modes that are embracing autonomy.

Question 3. The *number* of rail yard accidents has fluctuated but the *rate* of yard accidents has increased for the calendar years 2013–2021.

Does the industry know what is causing or contributing to this trend?

ANSWER. The number of yard accidents has fluctuated around an average number, which continues to be a very small number of accidents for the amount of work that occurs in yards. There can be more frequent opportunity for accidents involved in switching and other yard operations because that is where the train and railcar handling occurs. The railroads are very cognizant that this potential exists and they constantly work to reduce yard accidents. Railroads have every incentive to avoid accidents in yard operations because each accident costs resources at the yard, whether in damages, lading, or personnel and time—including potential delays to our customers. The steady yard accident count but increasing rate is due primarily to the headwinds of decreasing train miles in the industry. The FRA rate is determined by dividing the number of accidents by million train miles, and the train miles for the industry have been steadily declining since 2013 for a variety of reasons. The train miles have decreased almost 25% between 2013 and 2021, and the rate increased by about that same amount.

There is concern that proposed government policies, such as the Surface Transportation's Board's proposals, will tend to increase switching activities. Increased switching raises the risk exposure for yard personnel, and as such, could contribute to increases in yard incidents.

Question 4. When a Class I railroad has a reportable accident, how does it determine when to conduct simulation analysis to determine the root cause(s)?

ANSWER. When an accident occurs, railroads always want to know why so that steps can be taken to make sure it doesn't happen again. When the FRA or National Transportation Safety Board initiate an investigation, they examine a variety of elements, including physical evidence at the accident site, data on speed and train handling from event recorders on locomotives, records of maintenance inspections, employee training records, and so on. Railroads incorporate the lessons learned from those investigations into their practices and procedures. Railroads do much the same thing when they are investigating an accident. On more complex investigations, a railroad might choose to conduct modeling analysis to better understand the circumstances associated with the accident.

Again, though, in all cases, railroads will do their best to determine root causes and take steps to prevent reoccurrence.

Question 5. Do the Class I railroads review whether local-level managers and crews are complying with the railroad's train marshalling rules? Have there been accidents or incidents where it was determined that these rules were not followed?

ANSWER. Today, train marshaling rules are generally incorporated into computer systems that are used by rail personnel to build trains in rail yards. Computer systems can also flag the improper placement of cars picked up during a train's tour of duty. In the past, there have been accidents associated with the makeup of trains. Railroads incorporate this and other information regarding root causes of accidents into their efforts to prevent accidents in the future.

Question 6. In 2019, former FRA Administrator Batory testified to the Railroad, Pipelines, and Hazardous Materials Subcommittee that railroads participating in the Confidential Close Call Reporting System (C3RS) program saw a 41% reduction and a 50% reduction in derailments caused by human factors and run-through switches, respectively. His testimony also stated that the program improved management-labor collaboration on safety improvements and in several instances led to more systemic corrective actions. As of February 2022, 21 passenger, commuter, and Class II/III freight railroads participate in the program; however, no Class I railroad participates currently. The Railroad Safety Advisory Committee (RSAC) met in June 2022 and considered a task statement to promote the C3RS program.

If such a task statement is adopted, will the Class I railroads robustly participate in the collaborative RSAC process to consider greater participation in the C3RS program?

ANSWER. Like other railroads, Norfolk Southern has a robust program to identify the root causes of accidents and take steps to reduce future occurrences. As part of this process, we typically gather and analyze tremendous amounts of data and other information. In addition, Norfolk Southern has its own close call reporting system. To date, is has not been shown that a C3RS program would provide significant additional benefits beyond those derived from our existing evaluation and accident-prevention efforts.

QUESTION FROM HON. GRACE F. NAPOLITANO TO CYNTHIA M. SANBORN, EXECUTIVE VICE PRESIDENT AND CHIEF OPERATING OFFICER, NORFOLK SOUTHERN CORPORATION, AND CHAIR, SAFETY AND OPERATIONS MANAGEMENT COMMITTEE, ASSOCIATION OF AMERICAN RAILROADS

Question 1. Ms. Sanborn, thank you for your response to my question during the 'Examining Freight Rail Safety' hearing and your commitment to look further into the issue I raised regarding concerns from the Association of State Railroad Safety Managers. Below is the portion of their statement regarding railroads attempting to transfer maintenance costs for grade crossing projects to local governments.[1] As a major advocate for grade crossing safety improvements, I have strong concerns with these costs being passed onto taxpayers, which also has the effect of delaying, canceling, or scaling back these important projects. Having local governments pay

[1] "Recently there have been attempts by some railroads to pass through on-going maintenance costs to local municipalities when new or upgraded devices are installed (at grade crossings). There have been recent attempts by some railroads to assess annual maintenance fees to the local applicant, payable to the railroad in perpetuity, and in some cases, under threat of unilateral closure. The projects impacted by these actions include crossings which are:

- Upgraded with new signal equipment
- Upgraded from a passive crossing to an active one
- Opened where one did not previously exist
- Altered in such a way that the railroad considers the crossing project a new crossing

As a result, many projects which would be done to enhance grade crossing safety, are stalling, or being canceled. In certain circumstances, project scopes are being revised to eliminate the upgrading, replacement, or installation of gates and lights so as not to trigger the maintenance fee requirement. In so doing, aging crossing equipment will continue to degrade and ultimately malfunction while sourcing repair and replacement parts becomes more difficult. This barrier to equipment enhancement compromises the safety of the traveling public, to include pedestrians, bicyclists, etc. The actions by some railroads to assign maintenance costs to local applicants has reversed decades-long cost apportionment practices, as codified in many state statutes, which placed the maintenance responsibility on the railroad.

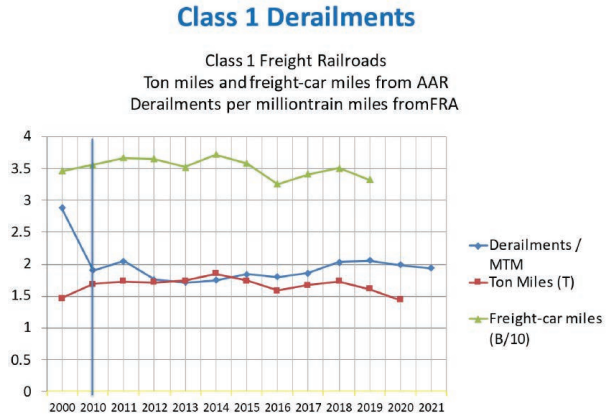
As many crossing projects are tied to Federal Highway Administration funding via 23 USC §130, states are beginning to have difficulty obligating these appropriated funds in a timely manner. The risk of funds lapsing in any given fiscal year has become a real impediment to their use. The strict guidelines governing the scoping and use of §130 funds make it impossible to expand their application to other safety priorities, further adding to the challenge of fund obligation."

for maintenance is a change from many states' statutory requirements and the history of grade crossing funding.

Can you please work with AAR to reverse course and ensure railroads, including the Class I railroads, continue to pay for the maintenance costs of these projects?

ANSWER. Norfolk Southern has long-standing master agreements with some states that cover the allocation of maintenance costs of certain grade crossing warning devices, which are sometimes reimbursed with state or local funds. Norfolk Southern also requests reimbursement for the cost of maintaining specialized equipment that supports the operation of quiet zones, such as four-quadrant gates systems. And Norfolk Southern typically seeks maintenance reimbursement for private crossings per the terms of private crossing agreements. Norfolk Southern does not seek reimbursement for maintenance costs unless covered by agreement or as otherwise permitted by law.

QUESTIONS FROM HON. SETH MOULTON TO CYNTHIA M. SANBORN, EXECUTIVE VICE PRESIDENT AND CHIEF OPERATING OFFICER, NORFOLK SOUTHERN CORPORATION, AND CHAIR, SAFETY AND OPERATIONS MANAGEMENT COMMITTEE, ASSOCIATION OF AMERICAN RAILROADS



Question 1.a. From 2000 to the mid-2010s, per the above graphic, the derailments per million train-miles dropped, from around ~2.9 to ~1.75. But that progress largely leveled off and beginning in 2016, we saw year-over-year *increases* in the rate of train derailments per million train-miles through 2019. According to this data, for 2021, we sit at ~2, still above the 2013 low. Coincident with this increase are massive slashes in workforce by Class I's: between 2015 and 2021, total workforce declined nearly one third. Putting these two statistics together, we can see that rate of train derailments increased at exactly the same moment Class I's began cutting their workforce.

What effect has precision scheduled railroading (PSR) had on the number of workers employed by the Class I railroads?

ANSWER. At a fundamental level, precision scheduled railroading is about using assets in the most efficient manner possible without sacrificing safety. The benefits associated with PSR—including reduced circuity and improved velocity—will directly benefit our customers through faster, more predictable transit times that require fewer assets to move their shipments.

At Norfolk Southern, we respectfully disagree that PSR is to blame for today's service challenges. Moreover, returning to operating models of the past that are more resource intensive and less efficient would be counterproductive and likely contribute to service inefficiencies.

Our competitors in the trucking industry are not moving backward; they're not even standing still. They are consistently thinking of new ways to leverage technology and to implement operational innovations that will improve the customer experience and improve efficiency. Railroads must do the same. If railroads are to stay competitive with trucks, they cannot return to the old ways of doing things. If they do, railroads' greatest advantage over truck—their ability to transport enormous amounts of freight extremely efficiently—will begin to erode. If that happens, over

time there will be less freight on the railroad and more on already overstressed highways.

Far from being out of step with the interest of our customers and the public interest, a simplified, efficient railroad operation (which is the goal of PSR) promotes network fluidity and a reliable service product that's good for rail customers and the public alike.

Our goal at Norfolk Southern, and I suspect at other railroads too, is to create a platform for growth for our customers through a safe and efficient operation. I know it is tempting at a time when rail service is under pressure to say there must be something wrong with our operating model. But at times like these, when the pressure is greatest, we must be very careful not to misdiagnose the problem. The real problem right now is execution; the problem is not PSR as an operating mode. At Norfolk Southern, we are devoting our energies to putting the resources in place to solve that problem, rather than returning to a way of doing things whose time has passed.

Question 1.b. PSR is based on the preeminence of lowering operating ratios. Railroads have made it clear that they are responding to shareholder pressure in implementing it. How are today's Class I's balancing safety, customer service, and stock performance?

ANSWER. None of the three elements listed—safety, customer service, or returning value to shareholders—has to come at the expense of the others.

Safety is paramount. As I noted in my testimony, for Norfolk Southern, pursuing safe operations is not optional, it's an imperative. We know we have an obligation to operate safely for the benefit of our employees, our customers, and the communities where we operate. That means that if an operating practice is unsafe, we will change it. If an employee acts in an unsafe manner, that will be addressed. If we are bringing on new employees, we will not rush the process such that they are not properly trained to be able to safely do the work we need them to do. We work very hard to instill in our employees a high level of safety awareness in everything they do. We also spend enormous amounts of capital to expand and enhance the capacity and capability of our network; virtually all of those investments directly or indirectly improve safety in some way.

Moreover, an unsafe railroad cannot possibly provide optimal customer service. Today, we know our customer service is not what our customers want or deserve. Restoring service to where it should be is crucial. That entails having the right number of employees, at the right location, at the right time to meet demand safely and efficiently.

Allocation of capital in the rail industry starts with investing in track, signals, equipment, and technology that improve our ability to safely meet our customers' needs. Put another way, the dollars we generate are invested back into ourselves first. That said, railroads have to be competitive in capital markets. Railroad shareholders must be able to expect competitive returns one way or another, or they will put their money in investments they think will offer such returns.

The bottom line is the ability to invest in our networks allows us to improve safety, provide the levels of service that our customers demand, and create the efficiencies we need to help ensure that our economy is competitive in global markets.

Question 1.c. PSR includes the operation of longer and heavier trains, so even holding steady on derailments per million train-miles could result in more disruptive and devastating derailments. What are Class I railroads doing to mitigate derailments and the effects of those derailments on the surrounding communities?

ANSWER. Railroads are committed to the safe operation of all their trains, no matter the length. Railroads have also adopted a variety of new technologies to make their operations safer and more secure. Railroads work hard to instill in their employees a high level of safety awareness in everything they do, and they work diligently to identify new operational enhancements, training, and other ways to further improve safety.

Railroads take numerous steps to help ensure the safety of longer trains. For example, railroads only run longer trains where the infrastructure can safely handle them. In recent years, railroads have upgraded track to enable it to handle longer, heavier trains. Railroads have also spent tens of millions of dollars to add new sidings and lengthen existing sidings on routes used for longer trains. The longer sidings allow trains of various lengths to safely make way for other trains.

Railroads employ sophisticated modeling tools that reliably predict the performance of a change in a train's makeup before the train is put into service. Railroads also review the past history of a route; incorporate lessons learned for the most effective operation of trains on that route; and perform supervised "pilot runs." Railroads also provide focused training to crews on any new changes.

Certain technologies have enabled railroads to operate longer trains more safely. For example, "distributed power" is the placement of one or more locomotives at points other than the front of a train. These extra locomotives are connected by closed communications systems to the head locomotive, operate in a coordinated fashion, and are all under the control of the train's engineer. Distributed power distributes a train's tension more evenly, reducing the chance that couplers that connect cars together will break apart in longer trains. Distributed power also can lead to better handling of longer trains on hilly and curved terrain, and it allows quicker and more uniform application of a train's air brake system. Advanced "train builder" algorithms can tell railroads exactly where to place locomotives and blocks of freight cars within a train to maximize effectiveness.

QUESTIONS FROM HON. DINA TITUS TO JEREMY FERGUSON, PRESIDENT, SHEET METAL, AIR, RAIL, TRANSPORTATION–TRANSPORTATION DIVISION

Question 1. With the rail workforce having been cut by one-third in recent years, it gives me pause that railroads are requesting waivers from the FRA to reduce manual track inspections.

What safety implications may occur due to less frequent manual track inspections?

ANSWER. Overall, the massive reduction of rail employees has greatly diminished rail safety. BMWE would be better to answer the specifics regarding autonomous track inspections. As operating employees, we have a strong reluctance to trust these technologies that were originally designed as a safety overlay to enhance worker safety. We want and need human inspections. The railroads are aggressively changing gears and want these technologies to replace workers. As train operators we see technological failures with Positive Train Control (PTC), Trip Optimizer (TO), End of Train Devices ETD daily. We would not want to trust these faulty technologies with our lives.

Question 2. Does the FRA's Fatigue Risk Management Program rule, released June 13th, adequately address worker fatigue? Are there improvements that could be made?

ANSWER. We believe the FRA has the best of intentions with the Fatigue Management rule. We applaud their efforts. The concern we have is with the carrier's compliance with the rule. As of yet, the railroads have not solicited our input about scheduled shifts, fatigue mitigation or anything regarding improving fatigue. Not only that, but they have also made things worse with their new availability policies which allow employees to take no more than two days off a month without facing discipline. If they take time off for being sick or fatigued, they are disciplined. If you would like me to provide copies of the various Availability Policies to you, I would be happy to do that. So, while the rule is a good idea, it doesn't appear that the railroads care one bit about fatigue.

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