Brotherhood of Maintenance of Way Employes Division
of the International Brotherhood of Teamsters

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WRITTEN TESTIMONY OF
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BROTHERHOOD OF MAINTENANCE OF WAY EMPLOYES DIVISION-
INTERNATIONAL BROTHERHOOD OF TEAMSTERS

BEFORE THE U.S. HOUSE COMMITTEE ON TRANSPORTATION & INFRASTRUCTURE SUBCOMMITTEE ON RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS

HEARING ON "AMERICA BUILDS: THE ROLE OF INNOVATION AND TECHNOLOGY IN A SAFE AND EFFICIENT RAIL SYSTEM"

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Chairman Webster, Ranking Member Titus, and Members of the Subcommittee:

Thank you for the opportunity to testify before the Subcommittee. My name is Tony Cardwell, and I am the President of the Brotherhood of Maintenance of Way Employes Division (BMWED) of the International Brotherhood of Teamsters. I became the National President of BMWED in 2022. Before I was elected President, I was a General Chairman of the Union Pacific Railroad in Oregon, where I have 25 years as a BMWED track worker and have seen up close the changes in the railroad industry over the years as it relates to safety, technology, and innovation.

Background about BMWED

BMWED is a national union representing the workers who build and maintain the tracks, bridges, buildings, and other structures on passenger and freight railroads in the United States. BMWED represents members on all six Class I freight railroads, Amtrak, most commuter rail systems, and several unionized short lines (most short lines are not unionized).

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BMWED members play critical roles in maintaining rail tracks, rail bridges, and overhead electric catenary systems that provide power to trains. BMWED members inspect track to ensure it is free of defects, maintain overhead rail catenary primarily from Washington D.C. to New York along the Northeast Corridor, and provide protection to workers working in the railroad right of way so that they don't get killed or injured by oncoming trains, track cars, machines or motor vehicles crossing grade crossings.

BMWED is one of the oldest unions in the United States and was founded in 1887 in Demopolis, Alabama. In 2004, the BMWED merged with the Teamsters and is now part of the International Brotherhood of Teamsters.

For Nearly 140 Years, BMWED Has Welcomed Innovations That Advance Safety

Importantly, BMWED is not "anti-technology." On the contrary, we are advocates of responsible use of technology when it improves the working lives of our members and more so when it makes the railways safer. In BMWED's 138-year history, there have been significant technological improvements in the rail industry that BMWED has embraced, particularly when it has helped our members and/or provided a safer railroad.

Some examples include:

Mechanization and Hydraulics: When the railroads were first created in the 1800s, Maintenance of Way crews lifted heavy rails and railroad ties manually, using their brute strength, heavy steel lining bars, and teamwork to get the job done, which was slow and dangerous work - many rail workers were severely injured in the process - but it also limited how much could be accomplished in a single shift.

Initial technological advances brought heavy equipment that used pulleys and cables, alleviating some of the brute force needed for rail construction. However, ultimately, the introduction of hydraulic systems revolutionized the industry. The backhoe's introduction replaced many exhausting and injury-prone processes by bringing hydraulic lifting power and mechanical precision into the equation. Backhoes could lift, place, and move materials with far less physical strain with the right attachments. Hydraulic and specialized track equipment were built to advance and allow machines to lay rail, pull spikes, drive spikes, and pullout and insert ties. Whereas workers might have only been able to install 200 ties a day manually, they can now install up to 1000 ties daily with the new equipment. For BMWED's workforce, this meant adapting to new labor requiring equipment training, spatial awareness, and mechanical problem-solving. Indeed, for some time, the introduction of hydraulic mechanization did eliminate some jobs, but it

also changed the skills our members needed and, in the process, created new jobs. BMWED members successfully adapted and today operate this equipment daily.

Track (Production) Tamper: Track ballast is the material that forms the track-bed upon which railroad ties are laid on top of. Ballast is critical to ensure tracks remain stable vertically and horizontally as trains operate over them and that water is drained correctly away from tracks so railroad ties do not rot. Ballast is usually made of stone or gravel; the material you see underneath railroad tracks. Historically, Maintenance of Way workers relied on manual labor and tools such as track jacks, lining bars, and tamping picks to compact ballast beneath the ties and adjust the track's alignment. This process was labor intensive, took time, and often yielded uneven results.

The introduction of the mechanized Production Tamper changed the rail industry by replacing the hard, manual work of hand tamping with a faster and more precise way to maintain track elevation and alignment. When the tempers came along, railroad workers could lift, line, and tamp the track all at once, making it easier to keep trains running smoothly and safely. For Maintenance of Way employees, this meant learning how to operate heavy equipment, understand hydraulic and electronic systems, and troubleshoot on the fly. Instead of pushing back against the change, they leaned into it and added a new layer of technical skill to their work. Today, BMWED workers operate track tampers daily. Production tampers are one of the most critical developments in railroad technology and are mainly responsible for the ability to increase the type and speeds of track on a universal basis while dramatically reducing the risks of derailment. This equipment continues advancements with lasers, touch screens, advanced diagnostics, and computer systems that genuinely improve the efficiency and safety of the entire railroad system.

Continuous Welding Rail: Historically, railroad tracks were laid using what is known as jointed rail. Jointed rail, as the name implies, were 39-foot track sections bolted at various points using joint bars and bolts to form long pieces of railroad track. Jointed rails are weakest at the points where the joint bars or bolts are and are prone to cracking or loosening at those spots, causing significant sway for the train car while undermining the track’s integrity.

In 1933, the first segment of Continuous Welded Rail (CWR) was laid in the United States, marking the beginning of a transformative shift in track infrastructure. CWR is rail track that has been welded together into ¼ mile pieces. And, because it has been manually welded together, CWR does not contain joints or bolts that jointed a track has. Train rides are smoother and more stable with CWR, which decreases the risk of derailment and increases the life of the rail.

The use of CWR expanded significantly in the 1950s as railroads sought smoother rides, lower maintenance costs, and the ability to manage faster and heavier trains. As jointed rail was gradually phased out, Maintenance of Way employees adapted to the evolving technology by mastering thermite welding, understanding rail stress dynamics, and ensuring proper anchoring techniques. This transition elevated their responsibilities and skillsets, transforming Maintenance of Way work into a more technical and specialized craft essential to modern rail operations. Maintenance of Way employees create and install CWR daily.

As evidenced by the above examples, BMWED and its members have adapted successfully to significant technological change in the railroad industry. There is one common thread with the technology we have come to support: demonstrable safety improvement in some form. Crucially, in these instances, workers are still doing the work, even if they use machines. Maintenance of Way workers today still install railroad tracks, ties, and ballast daily, even though they use machines to install these track components, and these components have advanced, like how Continuous Welded Rail has largely replaced jointed tracks. In addition to creating a safer and more efficient railroad system, these machines have made Maintenance of Way workers' lives easier - it is hard to imagine going back to installing rails and railroad ties manually like it was done in the 1800s, given how taxing that approach is. But we still need humans to operate these machines-there are no self-operating backhoes or track tampers, for example. And that is likely going to be the case for years to come.

BMWED has consistently embraced technology because it has empowered our members to work safer and smarter while making our railroad network safer, which is in direct contrast with the actions of the railroad industry, which has recklessly pursued cost-cutting at the expense of safety and quality of service in the past decade. The industry has drastically reduced its workforce levels by over 30 percent to unsafe levels while relying on unproven technology that cannot replace the expertise and skills of the workers the railroads let go. Additionally, the railroads have sought safety waivers to regulations that are still needed, and the Association of American Railroads recently asked the Federal Railroad Administration (FRA) to waive 80 more railroad safety regulations[1], many of which are written in the blood of previous derailments and incidents that killed people, including rail workers, and caused irreparable injuries and damages. These safety waivers are what the railroads euphemistically call "performance-based regulations" - all it means is no regulations.

[1] https://www.regulations.gov/comment/DOT-OST-2025-0026-0829

BMWED and the Future of Technology

How we do railroad track or bridge inspections today will likely not be how we do it 50 years from now. BMWED wants to be a union that adapts to the changes and continues to perform all railroad construction work, including operating machines. Just as our members had to adapt by transitioning from manual labor to operating machines, the next generation of technology will likely require our members to become proficient in using artificial intelligence, analyzing multiple data sources from sensors, and operating even more sophisticated machinery, such as drones. BMWED members can make that transition if given the opportunity.

In my role as President, I negotiate agreements between BMWED and railroads. I want to negotiate with companies about developing and/or deploying the next generation of meaningful technology so that BMWED can be partners by having our workers utilize technology, and we can ensure that our workers are being trained to have the skills needed to use the technology.

For example, drones will continue to play an increasing role in railroad track and bridge inspections, such as inspecting hard-to-reach bridges and structures and conducting heat, high water, and track washout inspections following storms. Our members currently perform these inspections, and if the railroads transition to drone-based methods, we fully expect that this work will remain BMWED work. Consistent with long-standing principles under our collective bargaining agreements, the railroads must train their workforce when new technologies are introduced. We want BMWED members to be trained and certified to operate drones, and we are prepared to work with the railroads to implement programs that acquire the necessary equipment and support our members in obtaining the FAA licenses and certifications required for safe and legal drone operation.

Adjusting to new technology involves ensuring that workers receive the training necessary to adapt to and operate said new technology. For example, BMWED has had a long-standing interest in training our members to get commercial driver’s licenses (CDLs) to do more tasks on the railroads that require heavy machinery since the amount of railroad operations involving trucks is rapidly increasing. Our collective bargaining agreements with the railroads pay our members who have CDLs a higher hourly wage, so by helping them get their CDLs, we can improve their economic standing. There have been some issues with federal grant eligibility, but we would like to work with Congress to make CDL training for railroad workers an eligible expense under the Consolidated Rail Infrastructure and Safety Improvements Grant Program (CRISI), so BMWED can apply for a federal grant through CRISI to do this CDL training.

Innovation works best when railroads and companies develop new technologies and work hand in hand with their workers and unions to identify problems and develop technological solutions. Railroad workers are on the front lines, and it makes good business sense to canvass workers who are intimately familiar with the technology they are using and can help spot problems in the field. Indeed, their feedback is invaluable. After all, our members are performing the work now and have valuable input on how that technology might best be deployed to improve the quality of work.

Despite over a century of continuous track maintenance and construction work through all the ebbs and flows of technology, railroads continue to resist engaging the BMWED in meaningful discussions about how new technology can be used to improve safety. Our collective bargaining agreements contain scope rules that govern the work our members perform, and under the Railway Labor Act (RLA), those agreements remain in effect until the parties agree to amend them. This work is reserved for BMWED-represented employees through decades of customary and historical performance. That means the railroads cannot unilaterally decide to shift safety-critical work away from our members without first bargaining with the BMWED and reaching an agreement.

When railroads explore new tools for track and bridge inspections, they should be collaborating with the workers who have been doing the work for decades. Unfortunately, that is not what we are seeing. As outlined below, we have repeatedly tried to bargain over Automated Track Inspection (ATI), and the railroads have refused each time. We have also asked the Class I carriers to let our members fly drones to perform track and bridge inspections, which is work that is already core to the maintenance of way craft, just with different tools. To date, none of the carriers have agreed. This lack of engagement is a missed opportunity and a safety concern. The safest outcome will always come from combining experienced workers with emerging tools, not removing the workers entirely.

Technology should be used to make America's rail network safer and help skilled workers do their jobs more effectively. It should not be used to bypass the people who know the work or to undercut the agreements that have protected this work for generations. Railroads should work with the BMWED to deploy new technology to enhance safety, not sideline it.

Too often, we see labor unions and the workers they represent as excluded from developing and deploying new technology. It is notable to me that one of the witnesses testifying alongside me is from RailPulse. RailPulse has many stakeholders who are part of their initiative to develop a next-generation telematics platform for railcars. These partners include shippers, Class I railroads, short line railroads, and railcar operating

lessors. To me, one prominent stakeholder is missing: labor. There is not a single labor union listed, and as far as I know, RailPulse has not approached any rail labor union to be part of the coalition or help develop the technology.

BMWED does not oppose RailPulse's technology, and we think better GPS technology on railcars can benefit shippers, workers, and other participants in the railroad industry. BMWED and our members may or may not be directly affected by RailPulse's technology. But I certainly would appreciate the opportunity to be part of the coalition working on the technology. And I know that several of my fellow rail unions would likewise want to be part of that coalition because RailPulse's technology will directly affect their members and their work. Some craft of railroad workers will have to ensure that those sensors on the rail cars are installed and maintained correctly, and the jobs of rail workers across different crafts are going to be affected by this technology, including the train crews that transport rail cars and the carmen that inspect rail cars for defects. They should be included in the development and deployment of this technology.

Over the last decade, the freight railroads have drastically reduced the training they provide to their workers. As mentioned above, programs like the Consolidated Rail Infrastructure and Safety Improvement (CRISI) program are invaluable because, uniquely under CRISI, rail unions are directly eligible to apply for CRISI grants. BMWED plans to apply for more CRISI grants to conduct workforce training for its members. Retaining unions' eligibility to apply for CRISI and expanding workforce development funding is one of BMWED's priorities in surface transportation reauthorization. This workforce development funding is critical to helping BMWED train our members to adapt to new technology in our industry so they are not left behind skills-wise.

We look forward to working with Congress on this issue.

No Existing Technologies Can Replace Trained Human Inspectors Capable of Identifying the Full Range of Track Defects

Where technology and innovation can go off the rails and be dangerous is when railroads or other private companies attempt to prematurely use that technology to replace human workers even when technology cannot replicate, or come close to replicating, what a human worker can do. While technology and innovation can be a force for positive change, they cannot come at the expense of safety, and there must be regulations around the technology to ensure it functions properly. Gutting our long-standing safety regulations just because a delusive piece of new technology comes along is a recipe for disaster.

Unfortunately, BMWED is going through that exact fight with the Class I railroads now in their attempt to reduce visual track inspections by upwards of 75 percent from twice a week to twice a month and rely solely on a form of technology known as Track Geometry Measurement Systems (TGMS), which the railroads refer to as Automated Track Inspection or ATI. ATI cannot replace what a human track inspector does because it only inspects track alignment, elevation, and gauge. It does not inspect for track defects that cause a majority of track-caused derailments.

As background, the Federal Railroad Administration requires railroads to inspect their railroad tracks through visual track inspections twice a week for 23 different track defects, which is much more than the ATI can detect. Track defects are the second leading cause of rail derailments after human error, so it is essential to ensure that railroad tracks are free from defects. The worker who usually performs these visual track inspections is called a track inspector, and track inspectors are part of the BMWED union.

ATI is a technology that has been around since the 1970s. ATI is a machine run over railroad tracks that detect one type of track defect: track geometry defects. Track geometry refers to the geometric properties of the track, including how wide the track is (track gauge) and any curvature of the track. These track geometry defects account for just six of the 23 defects FRA requires railroads to inspect. ATI cannot detect defects like broken rails, rotten ties, washouts where the track has washed away, or obstructions in the right of way. ATI can only detect 26 percent of what a human track inspector can detect and, therefore, cannot replace human inspections. Moreover, ATI only detects defects, while track inspectors identify problems before they become defects.

Nothing in federal law or federal regulations also prevents the railroads from running any form of ATI, including TGMS, as much as they want. The railroads run ATI right now, and BMWED members operate some ATI machines.

Since the railroads have spread false information about this, **BMWED supports using Automated Track Inspection technology, including TGMS, because it can detect certain track geometry defects better than the human eye**. **However, BMWED supports using ATI technology on top of the existing level of visual inspections, NOT as a replacement for those visual inspections.**

The Association of American Railroads is seeking a safety waiver from the FRA on behalf of its Class I railroads to reduce visual inspections by 75 percent to twice a month and solely rely on ATI as a replacement for track inspections.

Last year, the FRA proposed a rule requiring railroads to run ATI a few times yearly while keeping the same level of visual track inspections (twice weekly). **BMWED supported this proposed rule, including the proposed ATI requirement.** BMWED would still like to see the FRA finalize this proposed rule.

AAR and the Short lines (ASLRRA) opposed the proposed rule, claiming that running ATI 3-4 times a year was "too onerous," even though AAR has falsely claimed for years that they could not run ATI on the railroads. From BMWED's perspective, AAR's comments in opposition to the proposed rule show that this fight is not about ATI if the railroads are opposing a requirement to run ATI at specific intervals, but rather about the railroad's attempts to reduce visual track inspections because they want to cut back on costs, no matter the cost to safety.

As Maintenance of Way workers, we take track defects extremely seriously. In AAR's requested safety waiver, the industry wants to wait up to 72 hours to take corrective action for track geometry track defects found by ATI machines for upwards of 72 hours. This delay is in comparison to the current federal requirements that a track defect found by a human track inspector must be corrected immediately, including if it is a defect that an ATI machine can also find. What AAR seeks in their safety waiver would effectively result in passenger trains carrying people or freight trains carrying hazardous materials running over defective tracks. The consequences of allowing a defect to go unaddressed for up to three days could be yet another derailment that kills or severely injures people and causes irreparable damage to communities near railroad tracks. That raises significant safety concerns.

Comments are due July 9th to the FRA about AAR's proposed safety waiver to reduce visual track inspections by 75 percent. Now is not the time to be going backward on rail safety when there are hundreds of train derailments and accidents every year, any of which could be the next East Palestine. BMWED urges Congress to oppose AAR's proposed waiver because it is unsafe and will expose workers and communities to more train derailments, more deaths and injuries, and more property damage. We are grateful to Ranking Members Larsen and Titus for their support on this issue and ask every Member of Congress for their support on this issue as well.

"Innovation" and "Deregulation" are the Industry's Buzzwords for Cutting Costs and Lowering Safety Standards

One of the other reasons we need to get innovation and technology right in the railroad industry is that safety in the railroad industry has stagnated and even gotten worse in

many key safety metrics over the last decade. The Class Is' rate of total train accidents per million miles was 14.78 percent higher in 2024 than a decade ago in 2015, according to FRA data released in March of 2025. Even if you exclude highway-rail crossings, the rate of accidents was 8.25 percent higher in 2024 than in 2015. That increase in the incident rate is occurring even though Class Is ran 23 percent fewer train miles in 2024 than in 2015 (447 million vs 582 million). Using AAR's baseline, between 2005 and 2025, the railroads ran 31 percent fewer train miles. The industry's rate has increased despite running fewer trains with less frequency. So, the railroads are running way fewer trains, and safety is getting worse, not better.

Additionally, the number of employee-on-duty fatalities has remained constant over the last decade. There were seven fatalities in 2024 compared to eight in 2015, despite the number of employee hours decreasing 30.7 percent from 2015 to 2024. There are now significantly fewer employees in the industry, yet fatalities have not meaningfully improved compared to ten years ago.

More than 12,000 cities, small towns, and villages across our country have railroad tracks running through their communities. In 2024, approximately 500 cars carrying hazardous materials derailed or were damaged. Each accident risks the train workers and the communities that host railroad tracks. We expect better for an industry that has earned over $160 billion in profits over the last decade.

The East Palestine, Ohio derailment in 2023 showed the importance of human inspections in preventing derailments before they happen. Routine inspections of the different elements of the railroad system, including track, brake, rail car, and locomotives, are vital to ensuring there are no defects in any of those aspects of the rail system that could cause a derailment. The NTSB investigation found that the East Palestine derailment was caused by a wheel bearing on a rail car that overheated and was not caught in time. In a post-incident inspection, the FRA found that one out of four railcars in the East Palestine derailment had defects. The defects would have been identified and addressed if trained workers had thoroughly and physically inspected the railcars.

That inspection did not happen because Norfolk Southern (NS) and other Class I railroads are cutting back on the number of qualified Carmen, the craft that does these rail car inspections, by 40 percent since 2015. Additionally, NS and other Class I in recent years have limited the time that Carmen must inspect rail cars to 30 seconds per side of each rail car, and a train can hundreds of rail cars to inspect at one time. That time pressure prevents qualified and skilled workers from being able to do their jobs.

Even though NS had installed some technology called defect detectors that are supposed to detect defects before they happen, NS did not install enough defect detectors on the route that the East Palestine train was traveling on, so they were spaced too far about, and some of them were not working properly. Hence, the technology failed to do what it was supposed to do, which is another example of how technology cannot replace qualified workers in terms of safety.

Had NS had the proper level of Carmen and given them the time to do their job and inspect the East Palestine train when it was combined from different trains outside of St. Louis, Missouri, the odds are high that the defective wheel bearing on that train would have been caught and fixed and East Palestine would never have happened. The East Palestine derailment was entirely preventable with the proper workforce levels, regulations, and safety procedures in place. Instead, a community and its residents are traumatized for a lifetime. That fact is unacceptable and should infuriate everyone.

While East Palestine was not a track derailment, if the railroads successfully get this waiver and reduce visual track inspections by upwards of 75 percent, there will be many more track missed defects and potentially many more derailments along the scale of East Palestine.

In its investigation of a September 2021 Amtrak Empire Train derailment on BNSF track in Joplin, Montana, caused by bad track conditions that killed three passengers and injured 49 other passenger and crew members, the National Transportation Safety Board (NTSB) found that ATI ***should be used as a supplement*** to human track inspections, and ***should not replace humans*** (emphasis added)***:*** For example, automated track inspections by geometry cars or railcar-attached devices provide detailed information on specific track parameters, but they do not capture the diverse array of unique track hazards detectable to human inspectors. They are intended to supplement an inspection program and should not be used to supplant an inspector physically examining a track (Page 35).[2]

Safety will decline dramatically if we do not fix the current problems with how railroads do inspections across the board, including protecting the visual track inspections that the railroads actively seek to reduce by 75 percent. More preventable derailments like the one in East Palestine will happen because of increased defects. Congress must prevent these derailments by adopting common-sense safety regulations, especially around inspections.

[2] National Transportation Safety Board Final Report of September 2025, 2021, Joplin, Montana BNSF Derailment. "Derailment of Amtrak Passenger Train 7 on BNSF Railway Track." Published July 5, 2023. Accessible at https://www.ntsb.gov/investigations/AccidentReports/Reports/RIR2308.pdf

Conclusion

BMWED has navigated 138 years of technological change in the railroad industry and plans to navigate the next 138 years. We must survive as a union. While there is no way to predict what the future looks like, it will be different from today, and part of charting a path for the upcoming changes will involve successfully adapting to and embracing innovation and technological advancement. At the same time, these innovations should enhance the safety of workers and our rail system and make workers' lives easier. Too often, railroads and private companies first think about innovation and how to justify reducing their workforce, even when technology cannot fully replace human beings, which would decrease safety and put the public at risk. Labor unions and workers push back against unproven technology because companies misuse it for the wrong reasons.

My message to companies and railroads is simple: partner with the BMWED on technology so we can get it right. The BMWED is not scared of innovation or technological change but does want to ensure it is done correctly for the safety of our members and communities across our great country.