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OVERSIGHT OF THE AMTRAK ACCIDENT IN PHILADELPHIA

(114–19)

HEARING

BEFORE THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

JUNE 2, 2015

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Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

Bill Shuster
Chairman

Peter A. DeFazio
Ranking Member

Christopher P. Bertram, Staff Director

Katherine W. Dedrick, Democratic Staff Director

May 29, 2015

SUMMARY OF SUBJECT MATTER

TO:	Members, Committee on Transportation and Infrastructure
FROM:	Staff, Subcommittee on Railroads, Pipelines, and Hazardous Materials
RE:	Full Committee Hearing on "Oversight of the Amtrak Accident in Philadelphia"

PURPOSE

The Committee on Transportation and Infrastructure will meet on Tuesday, June 2, 2015, at 10:00 a.m. in 2167 Rayburn House Office Building to receive testimony on the National Railroad Passenger Corporation (Amtrak) Northeast Regional Train 188 accident in Philadelphia from representatives of the National Transportation Safety Board, Federal Railroad Administration, Amtrak, and the Brotherhood of Locomotive Engineers and Trainmen.

BACKGROUND

On Tuesday, May 12, 2015, at approximately 9:30 p.m., Amtrak Northeast Regional Train 188, traveling from Washington to New York, derailed in north Philadelphia, near Frankford Junction. There were approximately 238 passengers and five crew members on board. Tragically, there were eight fatalities and approximately 200 injuries. Local emergency responders were on the scene soon after the accident. The National Transportation Safety Board (NTSB) sent a team of on-scene investigators to the site of the accident that night. The Federal Railroad Administration (FRA) also sent a team of investigators to aid in the investigation. Amtrak and the Brotherhood of Locomotive Engineers and Trainmen (BLET) are also parties to the NTSB investigation.

Preliminary Facts

Preliminary reports from the NTSB's investigation are that the train consisted of one locomotive and seven passenger cars. After leaving Philadelphia's 30th Street Station, the train approached a left-hand turn traveling at a speed of 106 m.p.h. through a curve with a speed restriction of 50 m.p.h. The entire train derailed. NTSB reports that, moments before the derailment, the engineer applied the emergency brakes, and speed only decreased to 102 m.p.h. when it derailed.

There are no indications as to why the train was traveling at such a high speed. The track itself, according to NTSB, had been inspected the previous day by a geometric inspection car, and as of the date of this memo, no defects have been reported. Furthermore, the locomotive engine was a new, state-of-the-art locomotive. The investigative team is looking into the track, signals, mechanical condition of the train, human factors, and other possible factors that could inform the determination of probable cause. NTSB will review data from the event recorder in the cab of the locomotive, video from an outward facing camera, the locomotive, cars, and track, and will also interview those involved in the accident, including passengers.

NTSB

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident the United States and significant accidents in other modes of transportation – railroad, highway, marine, and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates government resources to provide assistance to victims and their family members impacted by major transportation disasters.

FRA

Generally, FRA is the federal agency charged with ensuring the safe movement of people and goods by rail. In addition to its headquarters in Washington, D.C., FRA maintains eight regional offices throughout the country. The agency has jurisdiction over all freight, commuter, and passenger rail transportation, but not over the safety of urban mass transit rail systems. FRA promulgates regulations, notices safety advisories, and issues emergency orders to ensure, among other things, that railroads and equipment are operated and maintained in a safe manner. FRA closely monitors data and trends to identify, reduce, and eliminate risks.

Amtrak

The Rail Passenger Service Act of 1970 (P.L. 91-518) created the National Railroad Passenger Corporation (Amtrak) and charged it with the responsibility for providing intercity passenger rail transportation. Amtrak's route system includes short-to-medium distance corridors and a long-distance route network. In addition, Amtrak operates passenger rail services on the Northeast Corridor (NEC). Running between Washington and Boston, the NEC is the backbone of the Nation's intercity passenger rail system, carrying more passengers than any other line. The NEC is host to intercity passenger rail, commuter rail, and freight rail operations. Of the 437 total miles of the NEC, Amtrak owns and controls 363 miles, with states controlling portions of the route north of New York City. Amtrak operates 153 daily trains on the corridor, including the Northeast Regional and Acela services, and Amtrak has captured over 75 percent of the Washington to New York air-rail market.

BLET

The BLET is a Division of the Rail Conference of the International Brotherhood of Teamsters (IBT) and is North America's oldest rail labor union. It represents locomotive engineers, conductors, brakemen, firemen, switchmen, hostlers, and other train service employees on Amtrak and other railroads in the United States. The BLET's total membership is more than 55,000. Since Jan. 1, 1992, federal regulations have required locomotive engineers to be trained and tested to be federally certified and licensed to operate trains.

WITNESS LIST

The Honorable Christopher Hart
Chairman
National Transportation Safety Board

The Honorable Joseph H. Boardman
President and Chief Executive Officer
Amtrak

Ms. Sarah Feinberg
Acting Administrator
Federal Railroad Administration

Mr. Dennis R. Pierce
National President
Brotherhood of Locomotive Engineers and Trainmen

OVERSIGHT OF THE AMTRAK ACCIDENT IN PHILADELPHIA

TUESDAY, JUNE 2, 2015

HOUSE OF REPRESENTATIVES,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
WASHINGTON, DC.

The committee met, pursuant to call, at 10:05 a.m., in room 2167, Rayburn House Office Building, Hon. Bill Shuster (Chairman of the committee) presiding.

Mr. SHUSTER. The committee will come to order. Today's hearing will focus on the tragic Amtrak accident that occurred in Philadelphia on May 12th. We have all heard some of the preliminary information surrounding this terrible event, an Amtrak Northeast Regional train en route from Washington to New York derailed at a curve in Philadelphia.

The National Transportation Safety Board has reported that the train was traveling at 106 miles per hour despite a 50-mile-an-hour speed limit on that portion of the track. Eight passengers tragically lost their lives, and approximately 200 were injured. We were not aware of any defects or issues identified to date with respect to the track, the locomotive or other infrastructure. Today, we will get an update from the NTSB on where their investigation stands, and any additional information they can provide on the cause of this accident.

Since the accident, the Federal Railroad Administration and Amtrak have taken several steps to improve safety along the Northeast Corridor. Amtrak is assessing all the curves along the NEC to determine if additional speed restrictions should be imposed. Amtrak has also announced it will be installing inward-facing cameras in its locomotives to help gain a better understanding of how incidents occur. And they have also committed to finish implementation of Positive Train Control on the Northeast Corridor by December of this year.

Today, I want to review what actions Amtrak and the FRA took on passenger rail safety before this accident, particularly why FRA didn't mandate the review of severe curves sooner.

Finally, this accident, once again, highlighted the central role the Northeast Corridor plays in moving people along the east coast. The NEC represents 2 percent of the Nation's landmass, but 18 percent of the population and 20 percent of our Nation's GDP. Hundreds of thousands of people use the corridor daily to get to work, travel between some of our largest cities. When the corridor is out for just several days, there is a real and significant impact on people's lives and the economy.

This committee is committed to focusing resources and improving the Northeast Corridor, including in our bipartisan Amtrak reform bill that passed the House just a few months ago. I look forward to working with my friends in the Senate to get that reform bill enacted into law. In closing, I look forward to hearing from our witnesses regarding these important issues.

I would now like to recognize Ranking Member DeFazio for an opening statement.

Mr. DEFAZIO. Thank you, Mr. Chairman. Thanks for holding this hearing today.

I certainly agree with you about the extraordinary importance to the concentrated population on the east coast of the United States on the use of this corridor on a daily basis in terms of the number of people that use it and the contribution to the economy and what happens when that corridor goes down.

And I also agree that this committee does have a long-term commitment to Amtrak and other infrastructure needs of the United States. Unfortunately, that is not shared by your Republican colleagues on the Transportation, Housing, and Urban Development Appropriations Subcommittee.

In fact, on the day of the accident, they cut $290 million from the capital budget of Amtrak. The capital budget goes to things like Positive Train Control. It also goes to things like the 140-year-old tunnel. You know, if that collapses or becomes unusable, the system will totally be out of use for an indefinite period of time or many of the 100-year-old bridges that need repair or replacement along that line.

Any cuts to the budget of Amtrak, which has a $21 billion—$21 billion, "B," billion dollar—backlog on critical infrastructure investments, maintenance investments, things that do include Positive Train Control, do include bridges, bridge safety, do include signal systems, and other things that are so outmoded. And I don't think they are using even vacuum tubes. They are sort of before that era.

It is not OK. And to further reduce that budget is going to jeopardize minimally the operation of this corridor or, even worse, cause an accident directly with a tunnel collapse or a bridge collapse or failure of signal system. We can't point to this accident and say that it was directly caused by a lack of investment. That is true. We still don't know what happened, and we are looking forward to the NTSB's findings.

But we do know that the NTSB first, in 1969, proposed that we should move forward with Positive Train Control. They have something called the Most Wanted List. In 1990, the first edition of the Most Wanted List said we needed Positive Train Control. And since that time, quite a number of people have died in preventable accidents around the country because of the lack of Positive Train Control.

Yes, human error. That is what Positive Train Control is designed to prevent: human error. This was probably human error. We still don't know if there was a mechanical malfunction. It is a relatively new train set. But we don't know yet. The point is, PTC could prevent accidents like this. It could have prevented many other accidents over the last two decades since it was first recommended by NTSB, and we need to move forward with all due

dispatch in installing that system on commuter railroads and passenger, other passenger railroads and on the entire Amtrak system, and on those required critical freight lines, particularly those carrying hazardous materials, particularly through urban areas.

So I am pleased we are here today to try and understand better what caused this accident, what we might do to prevent them in the future. I don't think we are going to get to any definitive point. But for me, bottom line is, you know, we can no longer ignore a $21 billion backlog. We can't ignore we are running trains over 100-year-old bridges of dubious stability. We can't ignore that we are running trains through 140-year-old tunnels that need total rehabilitation. We can't, any longer, ignore the fact that we have the signalization systems that are pre-vacuum tube era that are trying to link into more modern, sophisticated systems.

So there is much to be done, and I wish that all our colleagues in Congress shared our commitment to infrastructure investment.

With that, Mr. Chairman, I yield back the balance of my time.

Mr. SHUSTER. I thank the gentleman.

And with the concurrence of the ranking member, I will now recognize the chairman of the Subcommittee on Railroads, Pipelines, and Hazardous Materials, Mr. Denham.

Mr. DENHAM. Thank you, and good morning. First, let me thank you for holding this hearing; obviously, very important.

I also want to thank Ranking Member Capuano for quickly going up to Philadelphia and really surveying the situation with me. It was important to see firsthand and understand specifically some of the things that were happening.

But let me talk a little bit about my frustration. We went up there to immediately assess the situation. NTSB was already making definitive statements, and now 3 weeks later, while we had a brand new locomotive, we still can't confirm whether or not there was a malfunction with that locomotive. And even though NTSB made definitive statements, still cannot defend whether or not there was an operator error. Cannot identify whether or not there was an engineer that bypassed the system.

The engineer has been working with NTSB, but still cannot verify that the cell phone that was in use, whether it was texting or using cell phone service during that time. It is my understanding the engineer has given his passport, and yet we can't still identify whether or not there was an issue. So my concern is that NTSB came out and made an immediate statement a couple of hours after the accident, but 3 weeks later is unable to identify any of these issues around it.

I think this committee expects answers. I think the families are owed answers. I think the American public is looking to make sure that rail is safe across our entire Nation. We are also looking for solutions. I am looking forward to seeing PTC implemented in a very, very quick manner. But I would ask that you take a look at this emergency proclamation that was put out—emergency order that was put out by FRA.

My concern is, a year and a half ago, when we had Metro-North, one of the worst accidents that this country has ever seen, almost the exact same emergency order was put out. A year and a half ago. The same PTC was important, and yet we still don't have PTC

on that area of track either. So now a new emergency order saying that we will have PTC on the Northeast Corridor by the end of the year, obviously we have concerns.

We are looking for solutions. I think the families deserve to hear what those solutions are, but more importantly, that those solutions are actually put into place.

And with that, Mr. Chairman, I yield back.

Mr. SHUSTER. I thank the gentleman.

Now recognize the ranking member of the subcommittee, Mr. Capuano.

Mr. CAPUANO. Thank you, Mr. Chairman. I thank you for having this hearing.

I welcome the members of the board. I am looking forward to your testimony. We all want answers. I know you want answers too, but I also want them to be right. More than anything else, they need to be right, not speculation.

I also want to just comment that I know that many people along the Northeast Corridor, particularly those in Philadelphia, my friend, Congressman Brady, and my friend, Congressman Fattah, are watching this closely, and they want answers as well, and they will be keeping a close eye on this.

I guess I am looking forward to the specific lessons we learn, but I also think we need to look at the lessons that Congress should learn. What should our priorities be? We talk a good game, but we are the funders. Are we going to fund this, or are we not going to fund it? We talk a good game, but PTC is not new, and it is not limited just to Amtrak.

Positive Train Control is an issue across the country on every rail line of this country. Are we going to require it, or are we not? Everybody here knows we don't want to talk about it, but there are several proposals floating around Congress right now to delay it even further. And we all understand the realities and the cost involved, but those are questions we need to ask on a serious basis, how much responsibility will we as Members of Congress take on our shoulders the next time an accident happens and we look in the mirror.

Have we done everything we can reasonably do, reasonably do, to prevent it? I am not looking for scapegoats. I am looking for answers, as we all are. And I have full faith that the NTSB, along with the FRA and Amtrak, will find those answers. And, again, I want them quickly, but more importantly, I want them right.

And again, I appreciate you being here, and I appreciate the chairman calling this hearing very much. Thank you. I yield back.

Mr. SHUSTER. Thank you.

And with that, I would like to welcome our panel of witnesses. Thank you for being here today. First, the Honorable Christopher Hart. He is the Chairman of the National Transportation Safety Board.

Next, the Honorable Joseph Boardman, the President and Chief Executive Officer of Amtrak.

Next, Ms. Sarah Feinberg, the Acting Administrator for the Federal Railroad Administration, and has just been nominated. So congratulations as you go through that process. Good luck.

And Dennis Pierce, the national president of the Brotherhood of Locomotive Engineers and Trainmen.

Again, thank you, all, for being here. I ask unanimous consent that our witnesses' full statements be included in the record. Without objection, so ordered. Since your complete written testimony is going to be in the record, we would ask you to keep it to about 5 minutes, your statement.

And with that, we will start with Mr. Hart. Please proceed.

TESTIMONY OF HON. CHRISTOPHER A. HART, CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD; HON. JOSEPH H. BOARDMAN, PRESIDENT AND CHIEF EXECUTIVE OFFICER, AMTRAK; SARAH FEINBERG, ACTING ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION; AND DENNIS R. PIERCE, NATIONAL PRESIDENT, BROTHERHOOD OF LOCOMOTIVE ENGINEERS AND TRAINMEN, AND PRESIDENT, TEAMSTERS RAIL CONFERENCE

Mr. HART. Thank you, and good morning.

Chairman Shuster, Ranking Member DeFazio, and members of the committee, thank you for inviting the NTSB to appear before you today. Earlier this morning, we released a preliminary report on this investigation. It is a summation of facts that we have released up to this point, and I would like to review these facts briefly with you this morning.

At approximately 9:21 p.m. on Tuesday, May 12, Amtrak Regional Train 188 derailed at Frankford Junction north of Philadelphia's 30th Street Station.

Mr. SHUSTER. Can you pull your mic closer?

Mr. HART. Oh, yes. I am sorry.

As the chairman mentioned, the NTSB has determined that seconds before the derailment, the train was traveling at 106 miles an hour heading into a 50-mile-per-hour curve. Emergency braking was applied, but the train slowed to only 102 miles per hour before the data recording ended. Sadly, 8 people were killed, and more than 200 people were injured as a result of this accident.

On behalf of the NTSB, I would like to offer my sincerest condolences to those who lost loved ones, and our thoughts remain with those who are still recovering from their injuries. Briefly, areas we will explore in this investigation include tracks, recorders, mechanical, signals, operations, human performance, survival factors, and medical. Much work remains, but there are few facts that I can report to you today.

We know that a properly installed and functional Positive Train Control system, or PTC, would have prevented this accident. PTC is technology that is designed to prevent overspeed derailments as well as train-to-train collisions, incursions into roadway worker protection zones, and proceedings through misaligned switches.

The accidents we have investigated have shown us that we need technology that can step in when humans fail due to distraction, medical conditions, or other factors.

As a result, NTSB has called for train control technology for decades, as was mentioned, since 1969. Present law requires implementation of PTC by the end of this year, fully 7 years after the mandate was signed by Congress into law. We know that most rail-

roads will not comply with this law. Those railroads that have made the difficult decisions and invested in this proven safety enhancement should be commended for their leadership. Any extension of this deadline must have a transparent accounting of the steps that will be taken to meet a new deadline. Regulators and policymakers need that information to make important policy decisions, and the traveling public deserves that accountability.

Railcar crashworthiness is another area that we will investigate. As you can see from the pictures, the survivable space in the first passenger car was severely compromised. We will fully document and analyze the damage to this car and other cars and make recommendations that the NTSB determines are necessary to improve crashworthiness and build on existing recommendations in this area.

We have received full cooperation from the crew in their interviews and followup conversations. As you know, we are evaluating the engineer's cell phone records to correlate the timing of the data and voice activity on May 12 with the accident timeline. This process involves reviewing the timestamps from the phone records, which are from different time zones, with data from other recorded information, such as the locomotive event recorder, the outward-facing video camera, radio communications, and surveillance video. When we have clarity on this timeline, we will release this information to you and to the public.

Additionally, the NTSB has called for inward- and outward-facing video and audio recorders on trains since 2007. While Amtrak uses outward-facing cameras, they were not using inward-facing cameras at the time of this accident. These cameras can provide critical information to the NTSB as we work to determine ways to prevent future accidents.

In this case, the engineer states that he has no memory of the events leading up to the derailment. Video could fill in those gaps. I am encouraged by Amtrak's announcement that they intend to install inward-facing cameras, but we recommended installing locomotive cab audio recorders as well.

We look forward to learning more about Amtrak's initiative, and I hope the FRA will proceed with requiring the installation of both inward-facing video cameras and locomotive cab audio recorders throughout the U.S. rail fleet. As I stated, we have much work ahead of us, and I will keep you informed as this investigation proceeds. I appreciate the opportunity to appear before you today, and I am available to answer your questions. Thank you.

Mr. SHUSTER. Thank you, Mr. Hart.

And with that, Mr. Boardman, please proceed.

Mr. BOARDMAN. Thank you. I must start this morning by offering my heartfelt regret for the recent derailment at Frankford Junction. It was Amtrak's train on our railroad, and we are responsible for the incident and its consequences. I regret it deeply, and based on the conversations that I have had over the last 3 weeks, that sentiment is shared by everyone in our company.

Everything we have done since the accident has been driven by a sincere hope that we could do something, however small, to mitigate the suffering and loss that everyone endured as a result of this terrible accident. We have been greatly helped in that effort

by the people of Philadelphia, and I would like to thank all of them, but particularly Mayor Nutter, the police, the fire, and the EMS services, and the staff of the hospitals who received and treated the injured. Thank you for everything you did on behalf of our passengers and our employees.

I should also take this opportunity to note that we want to do everything we can to support the NTSB's investigation. I will refrain from addressing matters that are still under investigation. We will be working closely with both the NTSB and our regulators, the FRA, to ensure we address the root causes of this accident.

And to you, ladies and gentlemen of the committee, and to our passengers and employees, we run a safe railroad. And safety will continue to be our top priority. The Northeast Corridor, in particular, has an excellent safety record, and this accident is so shocking because it is so unexpected. And no other place in the country is a comparable volume of traffic moved with such a solid record.

The last previous derailment on the Northeast Corridor with passenger fatalities occurred 28 years ago. The Northeast Corridor's safety systems are the best in the country. We operate a layered signal system that provides trains with multiple levels of protection. There is a trackside signal system. There is an alerter to ensure that engineers are awake. There is a cab signal system. There is an Automatic Train Control system, ATC, to prevent train collisions and stop the train if the crews fail to acknowledge or comply with signals.

And finally, in places, there is the Advanced Civil Speed Enforcement System, ACSES. That is Amtrak's Positive Train Control system to stop trains if engineers fail to comply with authorized speed limits. ACSES is in service from New Haven to Boston and at points between Washington and New York where trains exceed 125 miles an hour. It is installed in the rest of the Amtrak owned-and-operated Northeast Corridor and should be operational in time to comply with the Federal statutory mandate of December 31, 2015.

These systems backstop the people who are responsible for safe movement of our trains. We operate a thorough training oversight and coaching system for our crews. Our engineers and conductors are required to pass an extensive FRA-approved training program and to develop a very high level of familiarity with the route. Probably millions of train movements negotiated the curve at Frankford Junction safely since Amtrak took over the Northeast Corridor in 1976.

The system works because, generally speaking, we have put together a series of layered nets, each guarding the previous layer. We rely on these systems, but we have never been able to completely eliminate the risk of human error. There is always a risk of a gap, and even the most tightly woven net. The train 188 derailment revealed one such hole in our safety net.

And in the weeks since the derailment, many people have raised a seemingly simple question: Why didn't the tracks where the accident occurred have some kind of safety feature installed to trip the signals and force the engineer to slow the train? This is the right question to ask, and I am going to address it directly while pro-

viding you the necessary background information to understand the answer.

In 1990, an Amtrak train derailed on a sharp curve in Back Bay Station in Boston, and collided with an MBTA commuter train. That derailment was caused by an engineer failing to slow before a curve. Shortly thereafter, industry regulators and operators reviewed the NEC and looked for other places where the approached speed of a train was greater than the speed at which the train might derail in the curve if an engineer failed to slow down.

At those points, we modified the ATC system by installing a code change point to force engineers to slow down. The southbound tracks at Frankford Junction were one such place. The derailment speed at Frankford Junction is 98 miles an hour. Northbound trains approach that curve at 80 miles an hour while the southbound train approaches at 110 miles an hour.

So in short, when a train approaches from one direction but doesn't slow down, there is no risk of derailment. But if a train comes from the other direction and doesn't slow down for whatever reason, there is a risk of derailment. We therefore applied the modification to the southbound tracks so that trains approaching from the north at speeds of 110 would receive a signal indication in the cab just before the curve, forcing them to slow to 45 miles an hour so that they could pass through the curve safely at 50 miles an hour.

The northbound track did not have the same protection installed because the approach speed was 80 miles an hour, which was slow enough that a train could round the curve at that speed without derailing if the engineer failed to slow down. At that time, the notion that an engineer might actually accelerate into the northbound curve was not a circumstance we anticipated; and thus, we didn't mitigate for it.

It was a reasonable decision reached by reasonable experts under reasonable circumstances. And since this and similar change points were installed in 1991, the application of this policy successfully prevented overspeed derailments throughout the Northeast Corridor for about 25 years. That clearly changed on May 12. The proper response now is for us to figure out what happened and to narrow or eliminate the gap so that this accident cannot happen again.

The full implementation of PTC later this year will be a major step forward in this regard. Until it is fully in service, we are working now with the FRA to implement the measures called for in the emergency order to ensure the safety of our trains and passengers.

The most important thing we can do, however, is to implement PTC. Amtrak is the Nation's leader in PTC. We were the first railroad to secure regulatory approval for our PTC system in the 1990s, the first to put it into operation, and the only company to have a system approved for use for speeds up to 150 miles an hour. No other Class I railroad in the United States, not one, is as far along in installing PTC as Amtrak is.

My belief in the importance of PTC predates my arrival at Amtrak. As the Federal Railroad Administrator, I worked hard to secure the passage of the law requiring PTC installation on the railroads. I still believe that the single greatest contribution that my

generation of railroaders can make to this industry is to implement PTC as rapidly as possible. And I promise you that by the end of this year this system, which will dramatically enhance safety, will be complete and operational on the NEC.

Thank you.

Mr. SHUSTER. Thank you, Mr. Boardman.

With that, Ms. Feinberg, you may proceed.

Ms. FEINBERG. Chairman Shuster, Ranking Member DeFazio, members of the committee, thank you for the opportunity to discuss issues related to the May 12 Amtrak accident in Philadelphia, Pennsylvania, and the safety of passenger rail.

We extend our deepest sympathies to the victims of this accident and to their loved ones. And I can assure them that we will take every step we can to ensure an accident like this cannot happen again.

I also want to thank the city of Philadelphia, its mayor, and its first responders for their heroic and incredible response to this accident. Their leadership was truly remarkable.

Let me say at the outset, all of us at the FRA are heartbroken about this tragic accident. The driving mission of our organization is to keep the public safe, and so while every accident matters to us, this accident in particular, which appears to have been preventable, and which took so many lives and left so many injured, is truly painful for our FRA family.

We continue to investigate the circumstances surrounding the accident. While it will take time to complete the investigation, we have not and will not wait to take actions that will improve the safety of Amtrak as well as other passenger rail operations.

On May 16, 4 days after the accident, I directed Amtrak to take several actions before allowing its operations to resume north of Philadelphia. I followed those directives with an emergency order on May 21. Amtrak has complied with those directives thus far, and the FRA will ensure that Amtrak follows through to fully implement them.

When we released the May 21 emergency order, we also stated that we were considering taking additional steps to direct similar orders at other passenger railroads that may have similar curve and speed issues. We continue our work on those directives, and we plan to release additional information about that work in the coming days.

And while the cause of this accident has not been officially determined, we do know that speed was a significant factor. And speed, simply put, is what we refer to as a human factor, a factor based on human behavior. Human factors remain a leading cause of all rail accidents. They are also the most difficult to address.

But today, I want to announce that FRA is preparing a package of actions that we will finalize in the coming weeks and months aimed at addressing just these kinds of factors: human factors, factors such as speed, distraction, and training. These actions may include additional emergency orders, safety advisories, rulemakings, agreements or other initiatives.

And again, beyond just those next steps, I want to assure you that the FRA is firmly committed to continue taking additional ac-

tions, as many as it takes, that will mitigate the risks and hazards identified in the ongoing investigation.

Now, there has been significant amount of public discussion about what specifically would have prevented this accident, which specific technology and which new regulation. But the reality is, is if we believe that the cause of this accident was speed, it would have been prevented by Positive Train Control.

As this committee is well aware, Positive Train Control is the single most important railroad safety technological development in more than a century, and it is absolutely necessary to ensuring the kind of safety that we expect on our rail system. Per the Congress' mandate, railroads are required to install PTC on all passenger routes and certain freight routes by December 31, 2015, 7 months from now.

FRA has been actively pushing the railroads to have PTC fully implemented by the deadline. We have met with the railroads for years on this issue. We have hired staff to assist and oversee the implementation of this technology. We have urged the submission of PTC safety and implementation plans. We have inquired with individual railroads and with the AAR about their progress. We have worked with the FCC to resolve issues related to spectrum.

We have also urged, year after year, for more funding to be directed at commuter railroads and at Amtrak to implement Positive Train Control. For the past 2 years, as part of the GROW AMERICA Act, FRA has requested $825 million to assist commuter railroads with the implementation of PTC, as well as additional funding to aid with Amtrak's implementation of PTC.

GROW AMERICA has also proposed that FRA be granted authority to review, approve, and certify PTC safety plans on a railroad-by-railroad basis. FRA asks for this authority in order to ensure that railroads would be forced to work with safety regulators to take other or equivalent actions to raise the bar on safety even prior to full PTC implementation. We believe it is important that even those railroads that fail to meet the congressionally mandated deadline be required to improve safety in the interim.

Despite the many challenges facing full implementation of PTC, the FRA's role is to carry out the enforcement of the deadline that is mandated by the Congress and to ensure that railroads implement PTC as quickly, safely, and efficiently as possible. And so on January 1, 2016, the FRA will be prepared to take necessary enforcement actions against railroads that have failed to meet the deadline. Safety will always be the FRA's first priority.

We appreciate this committee's attention and focus to issues related to the tragic Amtrak passenger train accident in Philadelphia. Again, I want to express our deepest sorrow for the victims and their families. We look forward to working with this committee to improve our programs and make the American rail network as safe, reliable, and efficient as possible, and I am happy to respond to your questions.

Mr. SHUSTER. Thank you, Ms. Feinberg.

Now, Mr. Pierce, you may proceed.

Mr. PIERCE. Good morning, Chairman Shuster, Ranking Member DeFazio, and committee members. The membership of the BLET

and the Teamsters rail conference that I represent. Thank you for the invitation——

Mr. SHUSTER. Could you pull the microphone closer?

Mr. PIERCE. OK. Thank you for the invitation to speak today.

I first want to express our sincerest condolences to the victims of Amtrak 188 and to their families. This is sadly familiar territory for me, because I have had to convey BLET's sorrow to the families of 11 members killed in the line of duty since I became national president 5 years ago, and I fear that this will happen many more times.

It is even more tragic when technology could have prevented the deaths and Positive Train Control could have saved five of those lives. The NTSB has confirmed that excess speed contributed to the derailment of Amtrak 188, and also, that this accident was PTC preventable. These facts implicate several core elements of Federal oversight of the railroad industry: the PTC mandate, crew size, fatigue, inward-facing cameras, and our expectations for Amtrak.

The small percentage of Americans who are working locomotive engineers and all railroad operating employees are among the mostly highly skilled, highly trained, and highly regulated professionals in the Nation. But today's workplace often creates task overload for engineers, and when too much is expected of any system, man or machine, a breakdown is inevitable.

One of the questions before us now is what level of risk we are willing to accept knowing all of that. Most of the industry, but not Amtrak or BNSF, seeks a blanket 5- to 7-year extension of the December 31 PTC deadline. Although not on the NEC, there have been peripheral problems with radio spectrum and FCC radio tower approvals, and those must be addressed. But they do not justify a blanket delay, and I urge you to not be stampeded into granting one. That would dishonor the memory of those who perished on May 12.

And we must remember that PTC is no silver bullet. It is not designed to prevent every accident. And any claim that PTC renders a second crewmember unnecessary is just, plainly put, not true. PTC cannot replace the second crewmember because it doesn't do the work of a second crewmember. It isn't the second set of eyes and ears trained on the road ahead, to monitor the left side of the train for defects, stuck brakes, or observe the left side of the highway rail crossings for highway rail grade incidents, or to separate the trains when we have first responders that need to get access.

We urge you to take up Congressman Young's Safe Freight Act, H.R. 1763, addressing those concerns. And we also think the time may have come to reconsider the 1981 NERSA language that eliminated the second crewmember on Northeast Corridor locomotives.

While we do not know whether fatigue played a part on Amtrak 188, fatigue should be a major concern to all of us. To be frank, the 2008 overhaul of the rail hours of service has produced very little progress towards mitigating fatigue. Work schedules are still far too variable and unpredictable, especially on freight railroads.

And instead of dealing with all issues contributing to fatigue, some have settled on single issues like sleep apnea. I am here to tell you that CPAP machines won't address fatigue caused by variable and unpredictable work schedules because you have to know

when to sleep in order to get the benefit. We must redouble our efforts to eliminate the systemic fatigue in the railroad industry.

I would also like to address the call for inward-facing cameras because it gets louder by the day. And we have said this for over 2 years: Cameras can be an accident investigation tool, but they create a false sense of security if more than that is expected. Cameras don't slow or stop trains; Positive Train Control does, and that is really the plainest way to put it.

Our privacy concerns with cameras are what I would call America's privacy concerns. Many railroads insist on leaving cameras on continuously, even when trains are stopped on a siding for hours at a time with crews captive on a locomotive cab that comprises about 65 square feet of space. Constant surveillance like this, we view as un-American and it really does nothing to improve railroad safety. The truth is that some railroads have shown more interest in using the camera data to punitively attack certain employees than for post-accident investigations, and that is just unacceptable to us.

Finally, some things do come down to dollars and cents, at least for Amtrak, which cannot continue to survive on the funding that it receives. What we spend on passenger rail is embarrassing when compared to China, the U.K., France, Austria, and even India, Russia, and Turkey. We cannot expect Amtrak to run a first-class railroad if it is funded at third-world levels.

We cannot expect reliable performance from infrastructure that is 75, or 100, or even 125 years old. Our transportation infrastructure is crumbling around our feet, including Amtrak, yet Amtrak is a good investment, a necessary resource, and shortchanging Amtrak creates other costs elsewhere. I strongly urge you to provide the resources necessary for Amtrak to thrive and grow and not to just limp along.

I appreciate the opportunity to address you today. We have worked with this committee to accomplish much to enhance rail safety, and I look forward to working with you to implement the lessons learned from Amtrak 188.

Thank you again for the invitation, and I will answer any questions that you may have.

Mr. SHUSTER. Thank you very much, Mr. Pierce.

We will start with a round of questions. And I would encourage all Members to—there is a lot of interest. This is an important topic. So I would encourage you to keep to 5 minutes. If the interest remains high, we will consider doing a second round of questions. So, again, please respect the 5 minutes. There are a lot of folks here that I think are going to ask questions, and I will be quick with the gavel. So watch the clock.

I will start off, Ms. Feinberg, in December of 2013, with the Metro-North commuter train derailment, it was a very similar circumstance. The train was going too fast. And the accident required the—or the FRA required Metro-North to put the codes into the ATC system to automatically slow the trains going at those speeds. And now you just issued an emergency order that literally cuts and pastes that order from 2 years ago to be put on Amtrak.

It seems that the next logical step—and I think you said this—is right now you are going to look at all the curves. But don't you

think they should have done that after the Metro-North derailment, should have put out orders, FRA to say—I know you weren't there at the time. But wouldn't that have been the logical step at that time to say let's look at the Northeast Corridor, let's look at the curves?

Ms. FEINBERG. Well, what we actually did at that time was we put out a safety advisory urging commuter railroads to take a look at their curves and to see if there were additional steps that they should take. The emergency order that went out at that time was aimed at Metro-North.

And I know, as you know, emergency orders are very narrow. They cannot be particularly broad. They have to be legally sustainable and enforceable. And at the time, the FRA looked at expanding that emergency order to many other railroads, to all commuter railroads and deemed that it would not be legally enforceable and that we did not have evidence to show that we had this problem elsewhere.

As you may remember, Metro-North had a series of fatal and nonfatal accidents. They seem to have a systemic safety culture problem. And when we looked beyond Metro-North, we did not feel that this was a systemic problem with other railroads. We were not seeing derailments at other railroads. We were not seeing engineers at high speeds. And so we believed the emergency order aimed at Metro-North would only be enforceable for Metro-North. We did a safety advisory aimed at others.

Mr. SHUSTER. Right. Legally, you thought you didn't have the ability to do the Northeast Corridor?

Ms. FEINBERG. That is correct.

Mr. SHUSTER. Well, does the E.O. today, are you able to enforce it throughout the Northeast Corridor, have them look at it, or do you have legal problems there?

Ms. FEINBERG. The E.O. that went out last week was—or, I am sorry—10 days ago was aimed specifically at Amtrak. We are now looking beyond Amtrak to see if we want to take similar or other steps aimed at other commuter railroads, but we wanted to act quickly aimed at Amtrak, and now we are looking at what else should be done beyond that.

Mr. SHUSTER. So only Amtrak?

Ms. FEINBERG. For the emergency order, correct.

Mr. SHUSTER. Does that mean that you have the authority to tell Connecticut and Massachusetts, which have State-owned lines, are they able to be included in that, or do you have legal problems with that?

Ms. FEINBERG. That would not work for the emergency order that is currently out but that is what we are looking at right now for next steps.

Mr. SHUSTER. See if you can include them, OK.

Mr. Boardman, Positive Train Control. You said in your statement you are committed to getting it by the end of the year. Can you talk a little bit about the process you have been going through the last couple of months? I know we had this conversation about spectrum. That really was the last step of the equation. Can you talk a little about the cost and the money? You have the money. And can you talk a little about the spectrum?

Mr. BOARDMAN. We, at this point in time, do have the Positive Train Control installed on the Northeast Corridor. All sections that we own on the Northeast Corridor spine. What we have learned, along with the freight railroads, that the 900-megahertz system that exists right now really wasn't providing the kind of reliability and was having even more difficulty in high-density areas. So the decision was, by all railroads, that we needed to go to a 220-megahertz kind of radio system. That really provides a much better propagation of the signal, and a much more reliable service.

So we finally received approval for the 220-megahertz system within the last couple of months, and we have to test it. We have to get the data radios ready. And that is what we are doing now. So that is where we are.

Mr. SHUSTER. And you learned that because you had PTC operational from New Haven to Boston; is that correct?

Mr. BOARDMAN. That is correct. Along with PTC we had in Michigan.

Mr. SHUSTER. That is where you learned the lessons from that. And then the entire stretch from Washington, DC, to Boston will be under that new increased megahertz?

Mr. BOARDMAN. For everything that we own or control.

Mr. SHUSTER. Right. Right. Right.

What would Massachusetts and Connecticut with the State-owned——

Mr. BOARDMAN. There is a section between New York and New Haven; New Rochelle, actually, to New Haven that we don't own or control. That is owned by New York State and by Connecticut, under control of Metro-North.

Mr. SHUSTER. Thank you very much.

Seeing my time is expired in the 5-minute rule, I turn to Mr. DeFazio.

Mr. DEFAZIO. I thank Mr. Chairman.

Mr. Hart, you implied, and you didn't expand upon it, that you are going to look at the cars themselves, whether or not more resilient cars could better protect passengers in crashes; is that correct?

Mr. HART. That is correct.

Mr. DEFAZIO. Have you looked at that previously?

Mr. HART. Yes, we have been looking at passenger car crashworthiness for quite a few years.

Mr. DEFAZIO. Mr. Boardman, I believe these cars are what era? 1970s?

Mr. BOARDMAN. Yes, sir. They started being delivered in about 1975.

Mr. DEFAZIO. And have you asked to replace them?

Mr. BOARDMAN. We have a plan to rebuild these cars and we are replacing some cars at this point in time, the ones that were built in the 1940s.

Mr. DEFAZIO. In the 1940s?

Mr. BOARDMAN. Yes, sir.

Mr. DEFAZIO. Yeah. OK. And are you going to somehow improve their resilience in the case of a crash?

Mr. BOARDMAN. Our expectation is to be able to use crash energy management, which is something that the entire passenger industry is beginning to do.

Mr. DEFAZIO. But these current cars don't meet that?
Mr. BOARDMAN. They do not.
Mr. DEFAZIO. They do not. And what would that take?
Mr. BOARDMAN. In terms of dollars or time?
Mr. DEFAZIO. Yeah. I mean, have you asked for this money?
Mr. BOARDMAN. If we asked for replacement of all the equipment we have, we are probably talking $3.5 billion to $4 billion.
Mr. DEFAZIO. Have you made a request?
Mr. BOARDMAN. We have made requests for rebuilding, and we have made some requests for replacing.
Mr. DEFAZIO. OK. And what happened to those requests?
Mr. BOARDMAN. The requests for replacing was a complex request, because if they were long-distance trains or they weren't receiving enough revenue for us to be able to pay back——
Mr. DEFAZIO. But the bottom line is, were you allocated the money or not?
Mr. BOARDMAN. No, sir.
Mr. DEFAZIO. OK. So Congress denied you the money?
Mr. BOARDMAN. Yes, sir.
Mr. DEFAZIO. OK. So, again, back to Mr. Hart, do you believe that we could either rehab these cars he is talking about in a way that would increase resilience and survivability, or do you think they need to be totally replaced?
Mr. HART. Thank you for the question. That is one of the things we will be looking into, and we will look into it here just as we did with the WMATA accident, in terms of the crashworthiness of their cars. We are looking into what it will take to improve——
Mr. SHUSTER. Pull your microphone closer, please.
Mr. HART. I am sorry. We are looking into the crashworthiness of the cars for this accident as we did with the 2009 WMATA accident. We don't know yet whether we would recommend new cars or whether these can be retrofitted.
Mr. DEFAZIO. OK. When I look at photos of—I mean, the locomotive looks pretty intact, and, of course, that is new construction and the engineer obviously survived. Yet, that first car never seen—and I heard some first responders say they had never, ever dealt with anything like that before. So, I mean, that implies—are there, in other nations or elsewhere around the world, where they have modern railroads, do they have more crashworthiness in their passenger cars?
Mr. HART. That will be part of our investigation as to what other countries are doing in this respect. We are very concerned about making sure that we are the leading edge of crashworthiness for our passenger cars.
Mr. DEFAZIO. OK. Ms. Feinberg, on Positive Train Control, I appreciate what you said about you are going to push really hard. Commuter railroads are one of the greatest laggards here, and they have asked for help from Congress. Congress has not been forthcoming. How are we going to deal with the commuter railroads? Many of those operate on a margin or at a loss now to get this technology installed.
Ms. FEINBERG. That is right. We have asked for $875 million to assist commuter railroads in implementing PTC. We have also opened up the RRIF program for railroads who are looking for

loans that will assist with PTC implementation. So we just completed work on a, I believe, $967 million loan to MTA that will assist with PTC implementation.

And then as we approach the deadline, one of the things we have asked the Congress for authority for previously is to work with railroads who absolutely won't miss the deadline—or who absolutely will miss the deadline, to work with them to raise the safety bar in the interim while they are still working to implement PTC.

Mr. DEFAZIO. So would they adopt some sort of interim operating changes to compensate for the lack of Positive Train Control?

Ms. FEINBERG. Exactly, and they would have to go through an approval process and work with us. We would continue to hold their feet to the fire to make sure we were working towards PTC implementation.

Mr. DEFAZIO. And when you looked at a staffed process, those who are really trying and have been delayed by the FCC or otherwise versus those who just haven't tried at all?

Ms. FEINBERG. I would expect it would be merit-based, correct.

Mr. DEFAZIO. OK. Thank you.

Thank you, Mr. Chairman.

Mr. SHUSTER. Thank you.

Subcommittee Chairman Denham for the next round of questions.

Mr. DENHAM. Thank you, Mr. Chairman.

Mr. Boardman, what operational changes has Amtrak made since the accident?

Mr. BOARDMAN. Could you ask that question——

Mr. DENHAM. In the last 3 weeks, what operational changes has Amtrak made, and will Amtrak be instituting more training in other efforts to ensure engineers are following all speed limits?

Mr. BOARDMAN. We did the code change on the northbound section of the Frankford curve as requested by the FRA. We have been evaluating the rest of the curves as required by the FRA, and also checking our entire Northeast Corridor to ensure that we had speed limit signs along the way, which all met the requirements of the emergency order. So we have done that.

In terms of how we check on our engineers, we have a very robust and regular method for that. For example, just since January 1, 2014, we have had over 16,000 speed checks of engineers along the Northeast Corridor. So that is like 35 times a day that we check somebody along the Northeast Corridor to make sure that they are operating at the right speed.

We have a recurrent training program, a block training program that lasts for a week every year for each engineer. And they have to be certified on a biannual basis. So we continue to do that. Any kind of changes that occur, we continue to provide additional training for engineers.

Mr. DENHAM. Thank you. And how many curves does Amtrak now have after doing this audit that have ATC? How many do you still have that don't have it that you want to implement the ATC on?

Mr. BOARDMAN. After the Back Bay accident and the consensus for what we needed to accomplish, they identified six curves, one of those was the southbound section of the Frankford curve. Since

FRA requested us to look at it under the new circumstances, we have identified at least four more at this point in time. We have 300 curves on the Northeast Corridor that could meet the newer conditions, and we are moving forward with those.

Mr. DENHAM. One of the questions that has continued to come up, we have done the passenger rail reauthorization bill, we have funded it fully under this committee. What guarantees do we have that the Northeast Corridor profits will actually be used to implement new safety and PTC regulations?

Mr. BOARDMAN. The way that we have worked with the committee on how we are developing a program is to make safety decisions on safety issues. And funding decisions are really about the larger scale of infrastructure, not only for the railroad, but for highways and for aviation, which I have been talking about for several years at this point in time and the necessity for increases in that way.

Safety decisions, we are making those decisions and making sure that we provide safety decisions.

Mr. DENHAM. I guess, the fundamental question is, when we pass a broad bill like that, what types of guarantees would there be on the priorities of those spending patterns? Last year, Amtrak spent $350 million on new cars. That may be an important issue, but the question would be, is it a priority of Congress, and is it a priority of Amtrak, and do those priorities align?

Mr. BOARDMAN. We think they do, Congressman. We work regularly with the staff of the committee. We work with the FRA. We work with all of those who are interested both in safety and the improvements along the Northeast Corridor. The sufficiency of funding if we do all the things that we want to do, there is always scarce resources, so we have to make those decisions based on those scarce resources. But we don't reduce the idea that we need to have a safe railroad. We make safe decisions along the way.

Mr. DENHAM. Thank you. And my time is nearly expired, but before I yield back, let me just thank you for your efforts, Ms. Feinberg, FRA, NTSB, as well as the mayor of Philadelphia all coming together for a very, very rapid response. I appreciate not only the collaboration, but certainly the timeliness, and I know, speaking on behalf of Mr. Capuano and I being able to tour that with you and help to understand how we can resolve these problems in the future.

Thank you. I yield back.

Mr. SHUSTER. Mr. Capuano is recognized for 5 minutes.

Mr. CAPUANO. Thank you, Mr. Chairman.

And I want to thank the panel for the testimony it had. It is a very thoughtful and very difficult decision to make on how to prioritize.

Mr. Hart, I would like to ask you, has the NTSB taken a look—and I am not so sure you have, and I am not even sure you should—have you taken a look at the decisions on prioritization of the PTC, or is that beyond the scope of your normal activities?

Mr. HART. We would look at the specific event that we are investigating and determine what needs to be done to prevent that event from happening again.

Mr. CAPUANO. But you wouldn't be in the business of determining whether the prioritization made by Amtrak or others—PTC—let's assume everybody did PTC tomorrow. It can't be implemented tomorrow. Every single rail company in the country would have to make a determination, what do we do first, second, third, fourth, fifth. That would not be the normal purview of the NTSB?

Mr. HART. That is correct. We would look at what needs to be done, i.e., PTC implementation, not how it's implemented.

Mr. CAPUANO. That is fair enough. That is what I expected.

Ms. Feinberg, I am just curious, do you agree with Mr. Boardman's comments that Amtrak will reach the December 2015 deadline to get PTC in the entire Northeast Corridor?

Ms. FEINBERG. We see no reason why they will not meet that deadline. We believe they will.

Mr. CAPUANO. And do you have any estimate of timeframe for the rest of the Amtrak system beyond the Northeast Corridor?

Ms. FEINBERG. Well, beyond the Northeast Corridor, other than in Michigan, that the Amtrak service will be dependent on freights implementing PTC, and so that could take some time.

Mr. CAPUANO. Do you have any estimate of the costs of that?

Ms. FEINBERG. The cost is well into the billions. Billions have been spent, and they have got billions further to go.

Mr. CAPUANO. So it would be multiple billions of dollars to the rest of the Amtrak system?

Ms. FEINBERG. Yes.

Mr. CAPUANO. And what about the rest of the Class I freight railroads? How much would that cost to get from where we are to full implementation? Do you have any estimate on that?

Ms. FEINBERG. I actually thought that was the question you were just asking, so again, billions.

Mr. CAPUANO. So that would be all the Class I including Amtrak?

Ms. FEINBERG. Yes.

Mr. CAPUANO. What about the short lines? Are they going to be implementing Positive Train Control, or is it just for the Class I's and Amtrak?

Ms. FEINBERG. For Class I's and for passenger railroads.

Mr. CAPUANO. So the short line freights will not be doing it?

Ms. FEINBERG. We are working with the short lines a bit separately.

Mr. CAPUANO. What about commuter rail?

Ms. FEINBERG. Yes.

Mr. CAPUANO. Will they be doing it?

Ms. FEINBERG. Yes.

Mr. CAPUANO. What about subway systems? I know that is not necessarily in your purview. I know that would be the FTA, but I would hope that the FTA would be working with you on that.

Ms. FEINBERG. We work closely with the FTA and they work closely with their organizations.

Mr. CAPUANO. So the final analysis, even if, under the best case scenario, the Government was flush with money and every private rail company were flush with money, it would take multiple billions of dollars and many years to get from where we are to where we want to be on Positive Train Control across the Nation on every line. Is that a fair assessment?

Ms. FEINBERG. Well, I would certainly agree with you on multiple billions with a "B." But in terms of multiple years, I mean, I worry that we are approaching that position, but we believe that there is a congressionally mandated deadline for December 31, 2015. We intend to enforce against it. This is not a new requirement for railroads.

Mr. CAPUANO. Fair enough.

Mr. Hart, have you taken a look on this accident whether seatbelts would have helped or not?

Mr. HART. That is part of our passenger survivability investigation. Yes, we are looking at that.

Mr. CAPUANO. So that would be part of your final report when you have one?

Mr. HART. Yes.

Mr. CAPUANO. Because I just rode the train up to Philadelphia with Mr. Denham. There are no seatbelts on the train. Yet, I flew down here today from Boston; I had a seatbelt. I had a seatbelt on the entire time. And it would strike me that I don't know—had no idea—and I am looking forward to your report—that seatbelts would be something that should be considered both to prevent death and injury.

Mr. HART. We will be looking at that as part of the survivability aspect.

Mr. CAPUANO. Ms. Feinberg, if the NTSB were to recommend seatbelts in passenger trains, would that be something you would pursue?

Ms. FEINBERG. It would certainly be something that we would look at that. There are different opinions about the requirement of seatbelts on trains.

Mr. CAPUANO. Different opinions?

Ms. FEINBERG. Yeah. While I recognize that seatbelts might seem like a good solution in the event of an accident, there are also people who tend to be up and walking around between cars during an accident. And the fact that you would have to harden the seats in order to put seatbelts into the seats——

Mr. CAPUANO. I understand. I am concerned about whether they should be put into current configurations. But I would suggest that people that have concerns about the seatbelts talk to the people at NTSB about automobiles, about planes. I understand, again, maybe their current configuration might need to be addressed over time. But the concept of seatbelts, again, I was under the impression it was no longer debatable that seatbelts in an accident at high speeds on any mode of transportation preferable to no seatbelts. If that is the case, maybe I will take mine out in the car too.

Ms. FEINBERG. We would certainly work closely with the NTSB just as we do on every recommendation, but there is a belief that the hardening of the seats that would be required in order to put seatbelts onto trains would actually cause more injuries in an accident.

Mr. CAPUANO. So we are back at it again. It is a cost-benefit analysis how many people have to die or get injured before we take the next step. The same question we had with automobiles 100 years ago, the same question we had with planes, and now we will go through trains now.

Ms. FEINBERG. No, sir, not a cost-benefit issue. It is simply, how do you keep the most people inside the car safe.

Mr. SHUSTER. Thank you.

With that, Mr. Duncan is recognized for 5 minutes.

Mr. DUNCAN. Mr. Chairman, thank you very much.

Ms. Feinberg, last week Secretary Foxx appeared to agree that this accident was not necessarily caused by a lack of funding. In fact, his exact quote was, "I don't think you can categorically say that more funding would have changed things." Do you agree with that statement?

Ms. FEINBERG. I think he was referring to the actual behavior of the engineer. I do think there are consequences to funding issues, yes.

Mr. DUNCAN. All right.

Mr. Boardman, I noticed that total operating revenues of Amtrak have gone up from $2.4 billion to $3.1 billion over the last 5 years, about a $700 million, or roughly a 20-percent increase in funding. And that on top of that, the Federal Government has given you $1.4 billion in additional funds each year.

And I am wondering, I am assuming that you felt that Amtrak was moving fast enough in installing Positive Train Control because you said in your testimony that you were ahead of every other railroad; is that correct?

Mr. BOARDMAN. We are ahead of every other railroad.

Mr. DUNCAN. And I am also assuming that you were shocked by this accident because you testified that it has been 28 years since you had a derailment-caused fatality or fatality caused by a derailment. So railroad passenger travel is still about the safest method of transportation; is that correct?

Mr. BOARDMAN. We believe that, yes.

Mr. DUNCAN. And did you ever tell this committee or the Congress that you didn't have the funds to move fast enough on installation of Positive Train Control?

Mr. BOARDMAN. We did not.

Mr. DUNCAN. All right.

Ms. Feinberg, what enforcement actions would you take against railroads that aren't moving fast enough, and would a railroad be given credit? For instance, if one railroad is a little bit behind another railroad in installation, but they have a better safety record, or maybe they have the best safety record of any railroad, would they be given credit for that good safety record?

Ms. FEINBERG. We are having an internal conversation at FRA now about how exactly we will plan to enforce against the deadline. Just as we discussed previously, there are—some railroads have behaved here better than others, certainly, and we don't want to punish railroads that are farther ahead for the behavior of railroads who have not done any work on implementation at all. So we are having an internal conversation. We have got discretion within the statute on how we enforce against the deadline to include anything from very little enforcement to daily civil penalties.

Mr. DUNCAN. Thank you very much. Thank you, Mr. Chairman.

Mr. SHUSTER. Thank you, Mr. Duncan. With that, Mr. Sires is recognized for 5 minutes.

Mr. SIRES. Thank you, Mr. Chairman. You know, I ride the Amtrak just about every week. I ride the Amtrak just about every week, and this accident really hit home. Ms. Feinberg and Mr. Boardman, can you speak to the future of Amtrak and passenger rail that Congress continues to use patchwork approach to form the improvements?

Mr. BOARDMAN. Well, I would like to, Mr. Sires, say, and I have said many times, and specifically to the chairman, I think, that my concern has been the reliability of the railroad. The reliability of what we do for our hardware on our catenary system, the reliability of our use of tunnels, whether it is in New York or whether it is through the Baltimore tunnels, that our reliability on the Portal Bridge that is ready to be rebuilt, that doesn't always shut properly. So the funding for infrastructure on the Northeast Corridor is absolutely behind the curve.

In the last reauthorization of our funding in the PRIIA Act, there was a commission that was established of all the States, the Federal Government and Amtrak, along the Northeast Corridor, and that is where the $21 billion backlog really came from; the necessity for us to rebuild an equity investment in this corridor.

We also have the requirement because of the growth of traffic on this corridor. We are handling over 2,000 trains a day on the corridor, and we need more capacity, which means we need some new assets as well; some new tunnels into New York; another new bridge going into New York, especially; and we need to fix this Baltimore choke point that we have along the corridor.

So from my perspective, that is where the funding is really needed. We make safety decisions based on safety. And the infrastructure decisions were being made based on the available funds.

Mr. SIRES. Thank you.

Mr. Hart, I just can't understand. This is 2015, and we are still analyzing whether the seatbelts would have made a difference. You know, I certainly agree with Congressman Capuano that all these cars, planes—they have shown that it works. And I don't understand why in 2015, we are still analyzing this. And in terms of people walking around in the train, I mean, people get up and walk on the plane too, right, but you take your life in your hands sometimes when you walk around these trains back and forth.

So Mr. Hart, can you answer that? I mean, I just don't see why we have to analyze this anymore. We are now analyzing this thing to what?

Mr. HART. Thank you for the question. We are looking at the total situation, not just the seatbelts but also the integrity of the seats themselves as Administrator Feinberg mentioned. There were several seats that detached from the floor. We are looking at the totality of circumstances regarding how to protect the occupants.

Mr. SIRES. Well, I got to tell you, I mean, looking at the seats, it just seems logical to me that seatbelts would make a difference. And to wait to analyze it more and more and more, I don't get it. I mean, I would be comfortable wearing a seatbelt. And I go on that train Mondays and Tuesdays and Thursdays and Fridays. I don't see it, we have to wait for this.

Ms. Feinberg, can you talk to that?

Ms. FEINBERG. In my experience, the NTSB is not shy about recommending improvements to safety. And so we will work closely with them, and anything that comes out of this accident we will work very closely.

Mr. SIRES. Would you say this is one of the cheapest recommendations that you can make?

Ms. FEINBERG. On seatbelts?

Mr. SIRES. Yes.

Ms. FEINBERG. No. I would not.

Mr. SIRES. It is more expensive than all the other recommendations?

Ms. FEINBERG. It is implementing seatbelts. And, again, you know, I will be deferential to Mr. Hart here, but implementing seatbelts on trains would require the change of every seat, which would—again, expense is not the priority here, but we would have to harden all of the seats.

Mr. SIRES. OK. Thank you, Mr. Chairman.

Mr. SHUSTER. That would cost billions of dollars?

Ms. FEINBERG. Yes.

Mr. SHUSTER. OK.

Mr. Mica, I recognize you for 5 minutes.

Mr. MICA. Thank you, Mr. Chairman.

First of all, Mr. Hart, I have a copy of the Metrolink crash report from 2008. You are familiar with that?

Mr. HART. Yes, I am.

Mr. MICA. And in that, you had two recommendations, major recommendations. One that we have cameras installed, inward-looking cameras?

Mr. HART. Yes.

Mr. MICA. That was in 2008. And then you also had the Positive Train Control recommendation, correct?

Mr. HART. Yes.

Mr. MICA. I want to talk about both of those.

First of all, let's go back to this 2008 report. If you just look at it, that wasn't the first time you recommended cameras or audio devices in the cab, is that correct?

Mr. HART. That is correct. It goes back several years before that.

Mr. MICA. In fact, in this report, you have 1997, after a 1996 crash and no operating crewmember survived, that was an Amtrak train near Silver Spring, Maryland, February 16, 1996, you recommended. That is R–97–9 recommendation. Then you had another accident with no surviving crewmembers that occurred in 1999 in Bryan, Ohio. Is that correct? And the recommendation, which is R–97–9 to the FRA.

The first one was to NTSB recommended to the FRA that they install these devices. Then the second one was back in 1999, it says also recommended that the FRA install this. Then your recommendation in 2005, there was a crash of a CN freight train in Anding, Mississippi, NTSB made the following recommendations to FRA. Is that correct, sir?

Mr. HART. Yes, that is correct.

Mr. MICA. R–07–3.

What did FRA do, Ms. Feinberg?

Ms. FEINBERG. Previously, the FRA has not taken action on——

Mr. MICA. They did not take an action in any of these. OK. And then the 2008 was also a recommendation. They did not take an action on that either, is that correct?

Ms. FEINBERG. That is correct. Our recent actions on inward-facing cameras——

Mr. MICA. In fact, it is been very difficult—in fact, since then, many of the freight rails have installed those devices. Are you aware of that, ma'am?

Ms. FEINBERG. Yes, sir.

Mr. MICA. Yes. In fact—but it has been difficult. In fact, they have had to go through lawsuits. I want this to be entered into the record. Here is—Kansas City Southern was attempting to put into—cameras in the cab. They were sued by Mr. Comstock and his group. Not only were both unions fervently opposed to KCS lawsuit; they will be asking the court to enjoin them from going ahead with the plan.

Could we put that in the record, please? OK. I ask unanimous consent.

Mr. SHUSTER. Without objection, so ordered.

[The information follows:]

SMART, BLET to fight KCS in-cab cameras

May 10, 2013

During a meeting with the presidents of the Brotherhood of Locomotive Engineers and Trainmen and the SMART Transportation Division on April 24, 2013, Kansas City Southern Railway announced that it intends to install and begin to use inward facing cameras in all of its locomotives over the next few weeks.

According to KCS, each locomotive will have two cameras – one behind the engineer focused on the control panel, and one across the cab focusing on both crew members. (Some locomotives with cameras installed already are in use in Mexico; others are being fitted for cameras in Shreveport.)

The carrier told the two presidents that it has "management prerogative" to take these actions and does not have to, and does not intend to, bargain with the unions over the use of these cameras, or the effects of this dramatic change on its operating craft employees.

Without notifying the unions, that same day KCS filed suit in federal district court in Shreveport, La., to obtain a ruling allowing it to implement its plan. Upon learning of these developments, BLET National President Dennis Pierce and Mike Futhey, President of SMART Transportation Division, together told the carrier that both unions vehemently disagree that the carrier has the right to install and use inward-facing cameras unilaterally without exhausting the bargaining processes of the Railway Labor Act.

The two presidents and the leadership of both unions view this as a serious change in working conditions and have agreed to work closely to resist its implementation. A coordinated effort is being undertaken in response.

Not only will both unions be fervently opposing KCS's lawsuit, they will be asking the court to enjoin the carrier from going ahead with its plan.

As of now, and until the court has issued a ruling regarding the parties' respective rights, the carrier has agreed not to turn on or use the cameras.

Union members who work for KCS on a locomotive that has a camera installed should request assurances from the proper carrier officials that the camera is not turned on and not in use. Any instance where that assurance is not given should be immediately reported to your general chairperson.

Also, to avoid any possibility of discipline, no member should attempt to move, cover or otherwise tamper with the cameras they encounter. Cooperation in this manner is vital.
Lastly, train and engine employees can be assured that their unions are diligently working to protect them and their interests in this matter. No legal stone will be left unturned in opposing the carrier on this issue.

Mr. MICA. All right. That's cameras and a little bit of the history and nothing being done.

Let's talk about financing that is in Positive Train Control. You just recommended you are going to have FRA financing available?

Ms. FEINBERG. The RRIF program does have financing available. MTA has——

Mr. MICA. Since 2012, how many RRIF loans have there been?

Ms. FEINBERG. I believe there have been three.

Mr. MICA. Two up till this year, I think. Well, a total of three.

The joke is there is more FRA Administrators—we have had more FRA Administrators than we have had RRIF loans. So you have the capability to loan money. If you need adjustment on that, you need to get to us. In fact, the private sector has the responsibility for installing Positive Train Control. They have actually run into some problems, haven't they, with FCC? So another Government agency has actually delayed this.

This is part of a—part of the problem was, I think, Native Americans, and also approval by FCC of those requests for licenses. Isn't that the truth?

Ms. FEINBERG. For the——

Mr. MICA. Yes. So it is not all the freight railroads. Some of it has been delayed. I would like submitted for the record to also show that there have been problems with FCC.

[The information follows:]



Federal Communications Commission
Washington, D.C. 20554

January 8, 2014

Timothy Strafford
Assistant General Counsel
Association of American Railroads
425 Third Street, SW, Suite 1000
Washington, DC 20024

Dear Mr. Strafford:

I am writing to thank you for your help and hard work in coordinating the railroads' participation and participating yourself in the recent meetings in Rapid City and Tulsa among the FCC, the Class 1 freight railroads, and representatives of Tribal Nations. These meetings were held to address the involvement of Tribal Nations in the historic preservation review process under Section 106 of the National Historic Preservation Act for wayside facilities needed to deploy positive train control (PTC). In addition to direct and candid government-to-government consultations between the Commission and the Tribal Nations in attendance, the recent meetings also included informational presentations and demonstrations by the individual Class 1 freight railroads of their actual PTC deployment plans. These railroad demonstrations, which were without precedent in the Commission's consultation practice, greatly informed the consultations. We found all of the exchanges at these meetings useful on multiple levels, including by providing opportunities for straightforward discussions with all parties about the goals and objectives to be incorporated into a Program Comment that will tailor Section 106 review for PTC wayside facilities. Perhaps most importantly, these meetings clarified issues of interest and concern for Tribal Nations that should and will be a focus of additional thought and discussion. In this regard, the dialogue at the recent meetings should serve to inform everyone's expectations about possible bases for consensus—and about areas where consensus may be more challenging.

Following our recent meetings, and as we take the next steps in our consultation plans, we are continuing to pursue parallel paths to provide guidance and direction for the process. First, as you know, we are preparing a draft Program Comment that will take into account the written comments of all stakeholders as well as the Tribal consultation input that we received. We acknowledge receiving meaningful input on a wide variety of issues. We are aiming to circulate a draft of the Program Comment to all relevant stakeholders, including the railroads, on January 17, 2014, in order to meet our previously stated goal of formally submitting a proposed Program Comment to the Advisory Council on Historic Preservation on February 14, 2014.

Second, based on the level of input we received and now that the initial groundwork has been established among the Commission, the railroads, and Tribal Nations with interests in the Northern Plains, Southern Plains, and Mississippi Valley regions, it is timely for the railroads operating in these locations to begin submitting proposed wayside facilities in the segments of track that were demonstrated in Rapid City and Tulsa through the Tower Construction Notification System (TCNS) in a Beta test format. Upon considering the views of both the Tribal Nations and the railroads, we consider it important to maintain momentum in order to promote both timely PTC deployment and an effective Section 106 process. For purposes of these initial Beta submissions, each batched TCNS filing should include no more than 20

contiguous sites, all located within a single county. Consistent with our previous guidance, each TCNS submission should include:

- U.S. Geological Survey maps showing proposed wayside pole locations, as well as a Google Earth overlay with associated information regarding the height and foundation depth of each pole. The maps should show sufficient detail to provide the location of individual wayside poles as well as the spatial relationship among the wayside poles.
- Method of installation. If the method of installation will not be the same for every pole within a submission, the filing should distinguish which poles will use which method.
- A description of any other ground disturbance that may be associated with the installations, such as for equipment staging or the provision of power.
- A narrative report that includes:
    - History of railroad line construction and major changes such as track rebuilding and removal of unused parallel tracks;
    - Impact of railroad construction and operation on the cultural heritage of Tribal Nations;
    - Information on Federal lands and Federally-recognized Tribal lands along or under tracks;
    - Status of tracks on or near Federal lands, including direct ownership or lease arrangements;
    - Location and details on all listed or determined-eligible historic properties along tracks or within .5 mile of the tracks, as well as any historic properties and Tribal religious and cultural sites that have been identified by Tribal Nations;
    - Discussion of the known potential for below-ground cultural resources and historic properties, including background information on any predictive model used for analysis;
    - Ethnographic information and context;
    - Results of any fieldwork undertaken;
    - Assessment of effects on historic properties and Tribal religious and cultural resources;
    - Photographs, as would be included in the Form 620 or Form 621; and
    - Resumes of professional staff responsible for preparing the report.

Steve DelSordo, Federal Preservation Officer at the Federal Communications Commission, will continue to serve as a resource for the railroads on the logistics of submission and other TCNS-related matters. We encourage each railroad to contact Mr. DelSordo prior to filing its initial TCNS submission in order to ensure that the information it submits is responsive and complete.

Finally, in conjunction with their use of TCNS, we encourage each of the railroads to build upon the initial conversations with individual Tribal representatives that were begun at Rapid City and Tulsa and build genuine working relationships. While submission of facilities through TCNS is necessary to create a formal record of review and promote administrative consistency, it is our experience that routine interactions and relationships are equally important to foster a practical and effective process. We expect that active nurturing of communications among all relevant stakeholders will ensure the potential for more productive outcomes for all involved.

We look forward to continuing to work with you and the other parties during this process.

Sincerely,

Jeffrey S. Steinberg
Deputy Chief
Spectrum and Competition Policy Division
Wireless Telecommunications Bureau

Mr. MICA. In fact, do you know how many licenses FCC has done per year approved on average?

Ms. FEINBERG. I do not know how many per year.

Mr. MICA. They do 20—they do around 2,000 a year. Do you know how many the freight company has been required to have approved and get approved so they could get this stuff installed by the end of the year?

Ms. FEINBERG. In terms of antennas?

Mr. MICA. It is 20—22,000. So there is a little bit of a backlog. And it is not right to penalize the freight rails for delays that are by an agency and things beyond their control. So when you say you are going to take them to task, I don't think that that is the right thing to do.

Just give disparity here, Mr. Chairman. Give me about 10 more. I yield back the balance of my time at this point.

Mr. SHUSTER. I thank the gentleman.

Ms. Norton is recognized for 5 minutes.

Ms. NORTON. Thank you, Mr. Chairman. The focus here has been, of course, on Positive Train Control because it does seem like such a silver bullet. I am a little leery of silver bullets. And I note that Ms. Feinberg testified that human factors continue to be the leading cause of accidents as she says on page 6 of her testimony on train accidents. I think this train was going—what was it? One hundred fifty miles an hour at that curve?

Ms. FEINBERG. 102.

Ms. NORTON. 102.

Now, Mr. Pierce, on page 6 of his testimony, says that although there has been concern about sleep disorders, he focuses on poor lineup information and far too many surprise calls for work. And he says, "we have identified these for more than a decade. Confirmed data has also shown that variable work cycles where engineers move from shift to shift routinely contribute to fatigue, yet very little has been done to address any of these issues."

Mr. Boardman, on November 25th, I wrote you a letter concerning the issue of fatigue. And I must ask you today, particularly considering that these very tracks carry volatile substances as well as passengers, I must ask you about the Amtrak proposal to reconfigure work schedules for train and engineer service employees at Union Station and in road service elsewhere on the Northeast Corridor.

I would like to know if you are continuing to reconfigure these work schedules even after this accident or whether you have stood down on those work schedules for the time being.

Mr. BOARDMAN. The route couplets that were changed along the Northeast Corridor remain. And the kinds of difficulties, I believe, that were testified to in terms of unpredictable work schedules don't really exist at passenger railroads. And unless there is unpredictable weather, or if we have a problem out somewhere on the long-distance trains, there is a pretty predictable schedule that occurs for Amtrak engineers.

Ms. NORTON. So you are mandating 12-hour shifts for a T&E employee?

Mr. BOARDMAN. They are not mandated at 12-hour shifts. They have a period of time that they have between the work schedules that they have.

Ms. NORTON. Mr. Pierce—let me ask Mr. Pierce.

Mr. Pierce, would you comment on what Mr. Boardman has said, and on this notion of poor lineup and surprise calls to work, whether that continues and what the effect has been on workers.

Mr. PIERCE. My comments were inclusive of freight and passenger. And because freight and passenger, as you say, interact on the same tracks, so we view that as a related issue. Amtrak jobs are scheduled much more so than the freight environment, but there are cases where shift changes that come, and people rotate from one shift to another do contribute to fatigue. Our comments were intended to at least note the things that can contribute to unsafe rail operations, and fatigue is one of those. It has been identified by the NTSB for a very long time, and it is also that we still try to continue to get our arms around.

Ms. NORTON. Could I ask our witness from NTSB whether you are looking at fatigue along with the obvious absence of PTC? If you are looking at issues of possible fatigue—I am assuming we don't have people driving these trains who would just ordinarily go 100 and whatever miles around the curve. And I am asking you if you are looking at what may have caused this engineer to be driving at excessive speed around this curve.

Mr. HART. Yes. We typically look at fatigue in all accidents. We have been recommending for years fatigue management programs that use science-based principles to determine issues like shift changes. We know that is difficult on the circadian flow of a person's body. So we have looked at that for quite a few years.

Ms. NORTON. Have you looked at 12-hour work shifts as to whether or not those are consistent with safety and these surprise calls?

Mr. HART. We have looked at a number of methods of work shifts and of cycle—of shift changes, and made recommendations that these need to be based on science-based fatigue management programs to look at the total picture and base them on science.

Ms. NORTON. Thank you very much.

Mr. HART. Thank you.

Mr. DENHAM [presiding]. Mr. Gibbs.

Mr. GIBBS. Thank you, Mr. Chairman.

Mr. Boardman, I am a little confused. On the PTC we are talking about on this track, I think it was a conscious decision—well, first of all, you—in your testimony, you said on the southbound that instituted, PTC was in place, right, Positive Train Control, and on the northbound it wasn't, because I think I read a report that it was decision that it probably couldn't get enough speed. You said the speed, the maximum figure you could get to was 80 miles an hour and derailment speed is 93, I think, in your testimony? Is that correct?

Mr. BOARDMAN. No, sir.

Mr. GIBBS. What was that?

Mr. BOARDMAN. It is not. It is not PTC, and it is a nonacceleration. The maximum allowed speed is 80 miles an hour northbound, and the turnover speed on the curve is 98.

Mr. GIBBS. No, I understand that. But I think I read in a report that the reason it was on the southbound—PTC was implemented on the southbound——

Mr. BOARDMAN. Excuse me, sir. I just want you to understand it is not Positive Train Control. This is not Positive Train Control that we are talking about here. It is Automatic Train Control.

MR. GIBBS. OK.

Mr. BOARDMAN. It is a difference—a major difference on how it operates. That is all.

Mr. GIBBS. OK. So Automatic Train Control is on the southbound track?

Mr. BOARDMAN. Yes, sir.

Mr. GIBBS. And not on the northbound track?

Mr. BOARDMAN. Yes, sir, Automatic Train Control is on both tracks, but the code change for the curve was only on the southbound track.

Mr. GIBBS. OK. So when you are talking about the megahertz thing, that was a different—that is PTC, not automated?

Mr. BOARDMAN. When I was talking about——

Mr. GIBBS. When you were talking about the 900 megahertz.

Mr. BOARDMAN. Yes. I was talking about Positive Train Control there.

Mr. GIBBS. OK. So we don't have—so for clarity here, there is no Positive Train Control on the southbound. It is automated?

Mr. BOARDMAN. Positive Train Control has been installed but not yet activated there.

Mr. GIBBS. OK.

Mr. BOARDMAN. It is using a code coming out of the Automatic Train Control. There are four codes.

Mr. GIBBS. OK.

Mr. BOARDMAN. They were really made, initially, for not having one train run into each other in a block under the automatic block system. It is——

Mr. GIBBS. OK.

Mr. BOARDMAN. I am digging into a much deeper piece here, but it is not Positive Train Control.

Mr. GIBBS. I was trying to understand this a little better.

Also, since this was a new engine, does this engine—this train have a capability to gain speed faster than the way it was previously thought?

Mr. BOARDMAN. The new ACS–64s have a different performance metric, just like we have three or four different kinds of locomotives that are out there that have different characteristics. So it wouldn't surprise me that it does.

Mr. GIBBS. OK. I think back in 2013 in a hearing you told Chairman Shuster, one of your bigger—one of the biggest priorities for Amtrak was to be the Northeast Corridor or long-distance services. And I believe you responded that long-distance services.

In light of this accident, are you looking to revisiting that? I mean—the big question here today is why wasn't PTC implemented sooner on this highly traveled Northeast Corridor? Were dollars reprogrammed to other areas of the country for long-distance services?

Mr. BOARDMAN. No, they weren't. We made decisions based on safety, and we knew what our scheduled time was, and the deadline was going to be December 31st of 2015. So we were working against that and resolving the problems that we moved along with on that process.

Mr. GIBBS. OK.

Mr. Pierce, in your written testimony you talk about, you take issue with the PTC replacing the second member of the crew in the cab. You have a number of accidents cited. In Chairman Hart's testimony, two-person crews were determined to—PTC would have prevented them, not the two-person crew. Do you agree with that or not?

Mr. PIERCE. There is one example cited, I believe, at Red Oak, Iowa, that is—that was not a PTC-preventable accident. When two trains get into the same block, as we call it, of signal, there is no meaningful way for PTC to avoid collision in that circumstance. So we do not believe that PTC can actually replace the second crewmember, because it doesn't do what he does and it isn't always going to prevent a train-to-train collision.

Mr. GIBBS. OK.

Mr. PIERCE. The majority of them will be prevented, but not all.

Mr. GIBBS. OK.

Ms. Feinberg, do you have a—to institute PTC on the Northeast Corridor, apparently it is not where I thought some of the laws—you know, billions of dollars, cost?

Ms. FEINBERG. I would defer to Amtrak on the actual cost, because I think they have—they have predicted it. But I think it is less than that just for the Northeast Corridor in terms of what they haven't implemented and how far they have to go to complete implementation.

Mr. GIBBS. Mr. Boardman.

Mr. BOARDMAN. I am sorry. I didn't hear the base question.

Mr. GIBBS. To put PTC—you said north—my previous question, that PTC is not implemented at all in the Northeast Corridor or parts?

Mr. BOARDMAN. It is installed. It is not activated because we needed that radio frequency.

Mr. GIBBS. It is megahertz. OK. So how much—what is the estimated cost to——

Mr. BOARDMAN. $111 million is where we are for the PTC on the Northeast Corridor.

Mr. GIBBS. $111 million. OK.

Thank you. My time has expired.

Mr. DENHAM. Thank you, Mr. Gibbs.

Ms. Edwards.

Ms. EDWARDS. Thank you very much, Mr. Chairman. And thank you to the witnesses today.

I know that, you know, there is still a lot of facts and many more questions that we have to examine before we get some real answers, but there is some things—and I want to follow up with Ms. Norton's comments.

On May 12th, my understanding, Mr. Pierce, is that the engineer who was operating was doing so under a new rule, under a new controversial work schedule that began on March 23rd of 2015, and

that included shorter turnaround times on most runs that had happened than before March 23rd. And so I guess I am just curious as to whether the union or the workers had been consulted prior to the implementation of this new work schedule as to what they believe the impact would be on them.

Mr. PIERCE. Yes, they have been. The unions are in discussions with Amtrak about the scheduling of the workforce on the assignments that you are talking about.

The assignments, as they are in place today, though, as I understand it, do not violate the Federal hours of service, and they are not restricted by the current contract language. It is something that the parties work out between themselves as to the best way to assign those jobs, and our representatives on Amtrak are the ones involved in those negotiations now.

Ms. EDWARDS. And did you express concerns to Amtrak about the schedules or about the inclusion of the schedules and the new modeling for scheduling?

Mr. PIERCE. I know that our representatives have shared our concern over the schedules with Amtrak, yes.

Ms. EDWARDS. And do you feel that that has been incorporated in the rule that has been in place?

Mr. PIERCE. I am not sure I understand that last question.

Ms. EDWARDS. Do you think that the concerns that you expressed about including the demands on scheduling issues that impact the workers have been appropriately included in the new work requirement?

Mr. PIERCE. I don't think the process is completed yet, so I can't really comment on what the final product will be. I know the parties are discussing it now as to what the appropriate assignment and the respite time should be between those runs.

Ms. EDWARDS. And to Mr. Boardman, can you describe for us, if you would, how you incorporate fatigue as an element of the modeling when it goes into the work schedules?

Mr. BOARDMAN. I cannot.

Ms. EDWARDS. You don't incorporate it in there, or you just don't know?

Mr. BOARDMAN. I can't describe if we have a modeling for fatigue in here. I know in this particular run there were no changes. It was the same schedule.

Ms. EDWARDS. OK. But in developing the model, what is it that Amtrak does to incorporate worker fatigue, engineer fatigue in the model?

Mr. BOARDMAN. In terms of whether we would have sufficient rest for the employee, we insure that that is the case. But having a model differently from a mathematical model—I am not sure of your question.

Ms. EDWARDS. OK. So Mr. Hart, when you examine what it is that—of the number of things that may have gone wrong, will you—how do you look at fatigue and how do you look at the modeling for work schedules?

Mr. HART. We start with the 72-hour history of the person involved and look at what that reflects. If that commands us to dig deeper, we will find out what kind of programs the employer has

that would result in the 72-hour history of this employee. And, we would dig deeper. But, we start with the 72-hour history.

Ms. EDWARDS. Ms. Feinberg, has the FRA engaged in a process of implementing recommendations, previous recommendations, from the NTSB?

Ms. FEINBERG. On this specific issue, we have done work on fatigue and generally for quite some time and are now in the midst of working on a comprehensive rulemaking that would address fatigue——

Ms. EDWARDS. So when——

Ms. FEINBERG [continuing]. Among other issues.

Ms. EDWARDS. Because we have done this when there has been transit accidents and other things. When recommendations come from the NTSB, how do you decide, if it is not a requirement, the recommendations? How does the FRA decide whether it is going to implement them? Because it seems to me that many of these recommendations just kind of remain on a list forever until there is an accident, and then we look at the recommendations again.

Ms. FEINBERG. Well, I wish it were as easy as the NTSB giving us recommendations and us just implementing them. But it just doesn't work that way. I mean, we have to enter into a rulemaking, or we would have to go into an emergency order, which probably wouldn't stand up in court. But, I mean, generally, a lot of times we would have to enter into a rulemaking that would ultimately take years.

And there are occasionally some NTSB recommendations that we may not agree with, and Chairman Hart and I will write back and forth to each other; my predecessor would write back and forth to each other to talk about it, and our staff would frequently work together to see if we can come together on it. But, you know, I think when I arrived at the FRA we had 72 outstanding NTSB recommendations. I have said that it is one of my top priorities to clear the deck. I think we are down to 63, and we meet weekly and work to clear the deck every single week.

Ms. EDWARDS. My time has long expired. Thank you, Mr. Chairman.

Mr. DENHAM. Thank you, Ms. Edwards.

Mr. Hanna.

Mr. HANNA. Thank you.

Among other things, and there are Members who would defund, cut back on Amtrak generally. This accident and this tragedy pointed out the importance of Amtrak, I think, in ways that we should observe. I think, Mr. Boardman, maybe you can speak to that. Because I view transportation of goods and people up and down the Northeast Corridor as a system. And what we noticed in those days—and you were back at work, I thought, very quickly, a matter of days—was a pressure on the highways, on aviation, an increase in—tremendous increase in some of those tickets and difficulties on the highway.

I wonder if you, Mr. Boardman, and maybe Ms. Feinberg would like to speak to that anecdotally.

Mr. BOARDMAN. Certainly, Mr. Hanna. I believe that you are right. I think that people understood, I think, intellectually at first, that shutting down the railroad was going to cause a major eco-

nomic blip for people who wanted to get to work, that needed to do business and conduct their work on that particular part of the railroad. And then I think they understood it, after almost a week, much more emotionally and in their pocketbook because of the problems that occurred in that period of time.

They could take 1 or 2 days, but when it became a shutdown for that period of time, their personal economy had suffered, and the mobility and the business community had suffered, and was suffering, from the increase and the number of cars that were on the highway and in the inability to even find a seat by aviation between——

Mr. HANNA. I heard tickets over $2,000 from New York to DC.

Mr. BOARDMAN. I read one of the articles where it was a pretty high level. And I think one of the things that the aviation people did say was the last seat is always much more expensive because the way they price their services. But it was definitely a problem.

Mr. HANNA. Ms. Feinberg.

Ms. FEINBERG. If I am remembering the numbers correctly, I think that NEC is a $100-million-a-day entity. And so any time service is shut down on the NEC or a portion of the Northeast Corridor, it has a dramatic impact, which is why we are frequently talking about the importance of making sure that the Northeast Corridor is in a state of good repair, and we are working on——

Mr. HANNA. And, of course, we have fully well concluded here that it is not in a state of good repair——

Ms. FEINBERG. That is right.

Mr. HANNA [continuing]. The $21 billion.

The one bridge that is over 100 years old that pivots, that could shut down virtually everything. If the plans are done, it could be built, if it were funded, and that is a point in the system that could virtually wreck everything for a long, long time. So that $100 million a day in a week would be, you know, $700 million, whatever.

Ms. FEINBERG. And there are multiple choke points like that.

Mr. HANNA. There are others. Do you know of others?

Ms. FEINBERG. There are tunnels underneath the Hudson, the Baltimore tunnel. It just depends on where, but there are multiple choke points like that.

Mr. HANNA. Mr. Hart, just a quick question for you. You and Mr. Pierce have a disagreement about audio and inward-facing cameras. I can understand both points of view, but I would like to give you a minute to maybe explain yours a little more thoroughly. Because, clearly, you have a difference of opinion over privacy and what Mr. Pierce referred to as un-American.

Mr. HART. Yes. Thank you for the question.

The more we know about what caused the crash, the more specifically we can recommend remedy to prevent it from happening again. That is the additional information we get from video and audio sources that helps us to be more specific about what caused the crash and then be more specific about our recommendations.

Mr. HANNA. So would you say, as a public servant, public employee, engineer, that it is not too much to ask?

Mr. HART. Well, Congress asked us to improve safety, and that is one of the ways we are trying to improve safety. We think that is a very important——

Mr. HANNA. Mr. Pierce, your response, just to be fair.

Mr. PIERCE. I think our position on cameras has been somewhat misrepresented. The problem that we have with cameras is that there is no regulation or legislation in effect today that govern their installation, and railroads are running programs on their own that they have imposed or implemented without consultation from the labor unions or from the people who are being filmed.

Mr. HANNA. So you think there is a way to do this that could accommodate everyone?

Mr. PIERCE. We have made, I don't know how many proposals both through the RSAC process with FRA, and we have met individually with each of the Class I freight railroads to try to come up with ways to have a reasonable implementation. We have not satisfied our goal yet.

Mr. HANNA. My time is expired. Thank you, Chairman.

Mr. DENHAM. Ms. Frankel, you are recognized for 5 minutes.

Ms. FRANKEL. Thank you, Mr. Chairman.

Well, one of the great things about being sort of at the end of the questioning is to get hear all the good ideas. And so this is what, so far, I have heard some suggestions: the cameras, seatbelts, hardening of the seats for the seatbelts, modernizing the cars, more training, more employees, better infrastructure, Positive Train Control. And I know that—and I join my colleagues in saying, extending sympathies to all the folks who lost loved ones and who are injured. And I know they're back home are very angry, wanting to know why we can't do more; we don't do more. But I think it is pretty obvious that—I mean, you give billions of dollars of figures every time we mention one of these suggestions.

So my question is, from a practical point of view, what do each of you recommend as the best way to proceed and that will keep train travel affordable and recognizing that this Congress has put a sequester on itself?

Mr. HART. Humans make mistakes. That is fundamental. The engineers are very good population of people. They are hard working, trying to do the right thing, but they make mistakes because they are human. That is not criticism, that is just a statement of fact. Humans make mistakes. That is why Positive Train Control is the most important single backup to respond to human error.

Mr. BOARDMAN. I will stay on the Positive Train Controls for a minute. And I believe we will be done on the spine of the Northeast Corridor by the end of this year. That will contribute the greatest leap in safety for the Northeast Corridor, and Positive Train Control in this Nation should be done by this generation of railroaders.

In terms of the infrastructure on the Northeast Corridor, it is no different than what is happening to our Interstate Highway System and to our aviation system. We, as a Nation, must begin to make an equity investment, even if we have to find other ways to do it with third parties, public-private financing. It has to occur for the future, or our economy will begin to suffer. That needs to happen.

Ms. FEINBERG. In terms of human factors, Positive Train Control is the game changer, fatigue management, and bringing our infrastructure up to a state of good repair.

Mr. PIERCE. I think the Positive Train Control, because the only thing that is not a machine on a locomotive is the crew, and they

are human. And it would be like walking a tightrope without a net not to have PTC, and this comes down to a discussion over what level of risk we are willing to take as a Nation and how we would fund avoiding that risk.

Ms. FRANKEL. And can, whoever wants to answer this question, just for the public's purpose, could you explain why—what is the difficulty in getting Positive Train Control? Is it just the cost? Is it getting the airwaves? Is it the technology? What is the biggest obstacle?

Mr. BOARDMAN. I will take the first stab at it, at least. For Amtrak, it has been, recently, the getting the spectrum of radio that we really need to ensure the reliability for a system that needs to be vital and needs to be failsafe, and that has been the holdup. We have moved it quickly now with the FCC. The testing will occur, and we will get this done by the deadline on the Northeast Corridor.

Ms. FRANKEL. So do you believe that the FCC has been responsive enough, or could they be more helpful?

Mr. BOARDMAN. We think they have been very responsive in the last couple, 3 weeks, yes.

Ms. FRANKEL. Well, how long have you been trying to push this through?

Mr. BOARDMAN. We began to run into problems with this in around 2012 or thereabouts that they began to point us to the private sector to buy the spectrum.

Ms. FRANKEL. Ms. Feinberg.

Ms. FEINBERG. Funding is certainly an issue. Spectrum has been an issue. PTC, it is a complicated technology. It requires, you know, a back office. It requires the antennas, the spectrum, transponders, WASA. It is a complicated technology, and it takes time.

The FRA requires railroads to submit a safety implementation plan to us so that we can go over that plan with the railroads, provide edits and changes, and so that we can work together to get them to a place where they are able to implement it.

We have received one safety plan from a railroad. It was more than 5,000 pages long, and it was appropriately long. So it is a massive undertaking. It is complicated, and it is expensive.

You know, we were able to get back to that railroad and provide them with feedback so they can move forward and start implementing, but it is certainly complicated and expensive.

Ms. FRANKEL. Thank you very much.

I yield back.

Mr. DENHAM. Thank you, Ms. Frankel.

And before I recognize Mr. Rice, let me remind Members that we have about 20 Members waiting in line with 7 still before the gavel, and it is quickly approaching 12 o'clock. So if there are any Members that would like to submit their questions in writing, this committee would be happy to accommodate them.

Mr. Rice, you are recognized.

Mr. NADLER. Mr. Chairman, point of information.

Mr. DENHAM. Yes, sir, Mr. Nadler.

Mr. NADLER. Did you just ask that Members who may wish to submit their questions in writing, or are you limiting the right of people to ask questions aloud?

Mr. DENHAM. We are not dictating when this committee will adjourn. We are only saying if there are Members that would like to——

Mr. NADLER. OK.

Mr. DENHAM [continuing]. By choice enter any questions in writing, we would certainly accommodate them.

Mr. NADLER. Thank you.

Mr. DENHAM. Mr. Rice.

Mr. RICE. Thank you, Mr. Chairman.

I will start with Mr. Hart. Mr. Hart, we have talked about a number of safety measures that could be added that would increase safety on these lines and some more expensive and some cheaper. We have talked about the Positive Train Control. We have talked about adding seatbelts and having to bulk up the seats. We talked about inward-facing cameras, among others. Between those three, which would be the cheapest to implement, do you think?

Mr. HART. We don't get into the cost of implementation. We just look at what most effectively improves safety.

Mr. RICE. Thank you, Mr. Hart.

Mr. Boardman, which would you think would be the cheapest among those three?

Mr. BOARDMAN. Well, for us, because we would already gotten the Positive Train Control moving forward, it is not a great expense at this point in time——

Mr. RICE. OK.

Mr. BOARDMAN [continuing]. In the overall part of it.

But we don't think that the inward-facing cameras is an outrageous cost either. We think that is a more reasonable cost.

Mr. RICE. Pretty reasonably priced thing, right?

Mr. BOARDMAN. Yeah. It is not off the shelf.

Mr. RICE. Why would inward-facing cameras increase safety? I mean, you are just taking a picture.

Mr. BOARDMAN. Because we can use them for efficiency testing. We can see what is going on with the engineer itself. We have actually had——

Mr. RICE. You think they might change the behavior of the engineer some?

Mr. BOARDMAN. We have a pilot program, and we have a system that we operate now, Metrolink, where there is much less stress than what the engineers thought they were going to have. And, actually, it's really helped——

Mr. RICE. Stress, huh? Stress.

Mr. BOARDMAN [continuing]. And other situations.

Mr. RICE. Ms. Feinberg, among those three; the seatbelts, the inward-facing cameras, and the train control, which would be the cheapest to implement, do you think?

Ms. FEINBERG. The most inexpensive would be inward-facing cameras. I think you would probably get more bang for your buck with PTC, but we are moving forward with both.

Mr. RICE. Mr. Pierce, which one do you think would be the cheapest; Positive Train Control, inward-facing cameras?

Mr. PIERCE. I think the jury is out on inward-facing cameras. The technology that the freight railroads have adopted has not even been measured to crash-worthiness standards. The technology

failed in several collisions, so the data was not available. It didn't provide the post-accident testing that it is supposedly being provided for.

Mr. RICE. Why don't we have inward-facing cameras? I mean it's been out; it's been recommended; it's been suggested.

Ms. Feinberg, why don't we have those now?

Ms. FEINBERG. We do have inward-facing cameras now. Many of the Class I's have already implemented inward-facing cameras.

Mr. RICE. Why don't we have them on all the trains? Why wasn't there one on this train?

Ms. FEINBERG. Well, because some have chosen not to implement inward-facing cameras. What we are doing is moving ahead with the rulemaking, although we may take some interim steps to recommend inward-facing cameras and to also put some regulations——

Mr. RICE. Chosen not to. Why haven't they been mandated?

Ms. FEINBERG. Well, the issue has rarely been for us to mandate them. It's been that railroads are moving ahead with them regardless, and should we put——

Mr. RICE. Mr. Boardman, why haven't they been mandated?

Mr. BOARDMAN. I don't have the answer to the mandate. We have been supporting that it occur.

Mr. RICE. Supporting. Why haven't you required it?

Mr. BOARDMAN. Well——

Mr. RICE. It would be very inexpensive to put a camera in the——

Mr. BOARDMAN. I have required it at this point. So the decision is we are doing that.

Mr. RICE. Why hasn't it been required till now?

Mr. BOARDMAN. Because I did not make the decision myself to do that. We have been supporting the Railroad Safety Advisory Committee and discussing how this should happen.

Mr. RICE. Who would have argued against putting in inward-facing cameras?

Mr. BOARDMAN. A lot has to do with how the data is going to be used, and whether it is going to be appropriately used.

Mr. RICE. You know, is it privacy issues with engineers? Is that one of the issues?

Mr. BOARDMAN. I would have to let the engineers answer that.

Mr. RICE. Mr. Pierce.

Mr. PIERCE. It is not only a privacy issue, it is just as Mr. Boardman says, it is the way the cameras are being utilized and how they are being implemented. There are no safeguards either legislative or regulatory.

Mr. RICE. Safeguards? All it is doing is taking a picture. It is not going to hurt anything. What do you mean safeguard? Why wouldn't they have an inward-facing camera? It is a cheap way to increase safety. Why would they not have an inward-facing camera?

Mr. PIERCE. You are suggesting that we are going to change behavior, and that suggests there is intentional bad behavior, and I would argue that that is inappropriate or not an accurate representation. The bottom line is——

Mr. RICE. Well, we have had proven cases of bad behavior. What, 2 years ago there was a driver who said he fell asleep, I believe, going into a curve, and people were killed. We don't know what happened in this case.

Mr. PIERCE. I don't consider fatigue bad behavior, Congressman.

Mr. RICE. Well, I would think if they are on camera, they might be a little more aware of their surroundings.

Mr. PIERCE. I do not think the camera will cure fatigue. It will not make you less tired if you are tired.

Mr. RICE. I suspect that it would be a great increase in safety in terms of changing behavior.

I want to ask one more question.

Mr. Hart, you said that you were looking at phone data for the last 3 weeks, including changes in—it was complicated by changes in time zones. How many time zones do you cross in Philadelphia on this line?

Mr. DENHAM. Mr. Hart, I would ask for a quick response.

Mr. HART. Yes.

The time zones we are talking about are the time zones in the phone system. The carrier's systems are based in different time zones, and so the time zones we are talking about are the time zones in the phone and the carrier's systems not the time zones that the train passes.

Mr. RICE. Thank you, Mr. Chairman.

Mr. DENHAM. Thank you.

Ms. Brownley.

Ms. BROWNLEY. Thank you, Mr. Chairman.

Mr. Boardman, I wanted to ask—I feel pretty confident, based on your testimony, at least for the Northeast Corridor that you are going to be able to complete PTC in a timely way by 2015. I wanted to know whether you believe we have the resources and technology for Amtrak, at least, to complete PTC across the country by 2015?

Mr. BOARDMAN. Well, Amtrak doesn't have the responsibility to actually implement the PTC across the country on host railroads for the most part. There have been a couple of Class III railroads, one in Kansas City and the other one in St. Louis, that believe that we need to be the ones to implement Positive Train Control in those communities. The rest of it is primarily the Class I railroads. And our part would be to implement it in our locomotives. And we will be ready, we believe, when they have their Positive Train Control available.

Ms. BROWNLEY. So Amtrak in California, for example, you were saying you are not responsible for PTC there?

Mr. BOARDMAN. Yes. It is not our line. We are not responsible.

Ms. BROWNLEY. I see. OK.

Ms. Feinberg, in terms of implementation, are there any penalties that would be imposed for railroads that have not met the PTC implementation?

Ms. FEINBERG. We have significant discretion in how we would impose penalties, but we are having an internal conversation, FRA, now about how we will go about enforcing against the deadline.

Ms. BROWNLEY. And when will you complete that task and the public would know?

Ms. FEINBERG. In the coming weeks, I would say.

Ms. BROWNLEY. In the coming weeks.

And, Ms. Feinberg, I also wanted to follow up with you just in terms of your opinion in lieu of sort of full implementation of PTC. Do you think two-person crews is something that would be an appropriate safety net for the short term? It doesn't sound to me like there is going to be full implementation by 2015. Certainly, the airlines have two crewmembers.

Do you think that that is something that could be a short-term or interim safeguard?

Ms. FEINBERG. Certainly, that is one of the things that we are taking a close look at, and that we believe could be an interim solution, along with probably some additional backstops as well. And there are some places where that two-person, two people in the cab may not be possible, but you could have additional folks on the train communicating back and forth to each other.

Ms. BROWNLEY. And why would two people in the cab not be possible in some instances?

Ms. FEINBERG. There is not room.

Ms. BROWNLEY. There is not enough room.

Mr. Hart, also the same question to you. Do you believe that a two-person crew might be an interim solution before PTC is fully implemented?

Mr. HART. Our experience is limited. It would be based on our accidents. But from that limited experience, we don't find that two-person crews are necessarily an improvement.

Ms. BROWNLEY. And why is that? It just seems to me common sense, that if you have two people driving a train, that if one person falls asleep, then the other person is there to take over.

Mr. HART. In theory, that is true, but two people can fall asleep; two people can be distracted. But based on our limited experience in this and other modes, we are not finding two-person crews to necessarily be a safety improvement over single-person crews.

Ms. BROWNLEY. Thank you, sir.

I will yield back, Mr. Chairman.

Mr. DENHAM. Thank you, Ms. Brownley.

Mr. Perry.

Mr. PERRY. Thank you. Is it my understanding you would like me to yield some time to you?

Mr. DENHAM. Thank you, Mr. Perry.

Just one quick question for Ms. Feinberg. Safety is, obviously, important across the entire country. And in my home State of California, PTC has been slow to be implemented as well. The sum of $3.7 billion was put to California high-speed rail. That money has now been transferred to the Caltrain, to electrify Caltrain. It has been transferred to the Transbay Terminal, $400 million of that, to help implement that Transbay Terminal.

Why are we not transferring money to do PTC on the connector routes in California?

Ms. FEINBERG. We have asked for significant funding for PTC implementation for the commuters. You are asking specifically if we would transfer money from the high-speed rail authority into PTC?

Mr. DENHAM. You are using stimulus dollars in many different places in California for electrification and for changing the ter-

minal, but yet not using it for PTC, which, it is my understanding high-speed rail would need PTC. These connector routes should have PTC already. Why are we not using the money that is going to revert back to the Federal Government next year, if it is not spent, if that money is available today, why aren't we using it for PTC in California?

Ms. FEINBERG. Well, it will be going to PTC in California. Much of our money that has gone out, I think $600 million of it has gone towards PTC.

Mr. DENHAM. So you are saying it is a priority? You just haven't been able to spend it quick enough in California?

Ms. FEINBERG. No. I believe that it will get spent on time, by the end of the year.

Mr. DENHAM. OK. Just for the record, we are spending California high-speed rail dollars, Federal stimulus dollars, on many different areas in California to do other things. We are far behind on PTC, and it has not been a big enough priority to use those stimulus dollars on PTC in California?

Ms. FEINBERG. Sir, if you are asking if we can take stimulus dollars that's going to high-speed rail and transfer it to PTC, I don't believe that would be in keeping with the grant agreement, but we can certainly take a look at it and come back to you with a formal response. But I don't think that would be in keeping with the grant agreement.

Mr. DENHAM. Thank you. I yield back to Mr. Perry.

Mr. PERRY. Thank you, Mr. Chairman. Reclaiming my time.

Ms. Feinberg, I just want to establish something. There has been an assertion, or at least an implication made in this committee that Congress itself, and maybe certain individuals of a certain party are responsible financially for the mishap, the accident in Philadelphia. So I just want to get the facts straight.

It is my understanding as well that FRA has stated that a lack of public sector funding may cause unwanted delays in fully implementing PTC. And it also, according to my records, would cost about $131.2 million, $131.2 million to fully implement Positive Train Control on the Northeast Corridor, the track that Amtrak owns.

Now, over 12 years, they have lost over $1 billion in food service. It is also the inspector general's opinion that Amtrak paid large bonuses to ineligible management and staff. The 31 million Amtrak tickets sold last year were subsidized by the taxpayers to the tune of $42 to $350 apiece, and this particular portion of line makes anywhere from $400 million to $500 million a year. It seems to me, plus we give Amtrak, the taxpayers fund Amtrak to the tune of $1.3 billion to over $2 billion dollars a year. How come they can't spend 10 percent of what they lost in food service on Positive Train Control, and is it Congress' fault that positive train—is it FRA's assertion that it is Congress' fault that PTC wasn't funded in the Northeast Corridor?

Ms. FEINBERG. Well, on Amtrak, Amtrak has said that they will implement PTC by the congressionally mandated deadline of December 31, 2015. And we believe that—we agree with them that they can meet that deadline.

Mr. PERRY. So it is not a funding issue?

Ms. FEINBERG. Amtrak does not have a funding issue in terms of PTC. They have said that they will meet the deadline.

Mr. PERRY. Just to be clear, Amtrak does not have a funding issue with PTC by the deadline. So it is not Congress' fault that it is not implemented timely? Correct or not correct?

Ms. FEINBERG. Amtrak, specifically, has said that they will meet the deadline.

Mr. PERRY. Right.

Ms. FEINBERG. We have had many conversations about the need for—or our request of the Congress to give additional assistance to commuter railroads to meet the deadline. We have also requested additional assistance for Amtrak to meet the deadline.

Mr. PERRY. One last question, Mr. Chairman.

Before I came here, I think about 2009, $800 billion in stimulus was passed, and the majority of it was to go to infrastructure. If PTC was such a concern, how much was spent of the $800 billion, understanding that $131.2 million, a very small percentage, if you look at that, would be required to fully implement PTC in the Northeast Corridor. How much was spent—allocated by this Congress, how much was spent on PTC if it is such a priority? Do you know?

Mr. DENHAM. Ms. Feinberg, I would ask for a quick response.

Ms. FEINBERG. We will have to get back to you with how much of that would——

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

Mr. DENHAM. Thank you.

Mr. Nadler.

Ms. BROWN. I think it is——

Mr. DENHAM. Ms. Brown, you are recognized for 5 minutes.

Ms. BROWN. Thank you, Mr. Chairman.

As former ranking member of the Subcommittee on Railroads, Pipelines, and Hazardous Materials, a strong supporter of rail, my heart goes out to the families and individuals who have suffered in the wake of the Amtrak train derailment that occurred recently in Philadelphia. I personally want to thank today's panelists for their hard work and dedication—and the employees—that they have shown during the terrible disaster.

Mr. Boardman, I want to particularly thank you for your leadership. But my question, I know that you all monitor the trains and the rates of the speed. Can you discuss what safeguards that you have in place to check the speed of your locomotives and engineers?

Mr. BOARDMAN. Yes, ma'am. We have a regular series—and I don't think you were here earlier when I said that we looked and we have checked the speed of—we have had 16,000 checks of speed since January 1st of 2014. We do that through radar with our road foreman, and we do that by downloading the equipment in the locomotive to find out what speed they are traveling.

Ms. BROWN. Yes, sir. I was here during the entire time. And I heard it. I just wanted you to repeat it again.

Mr. BOARDMAN. Thank you.

Ms. BROWN. Positive Train Control. That is one and one of the most important aspects of safety. What we talked about the cars itself, and we talked about the crew. It is a combination. Can you expound on that a little bit?

Mr. BOARDMAN. Certainly. Positive Train Control is a system that is layered on top of several systems that we operate today, one of them being Automatic Train Control. And we even go back, and every time there is a temporary speed change, we use a manual system called Form D control system because the dispatcher and the engineer has to write down what has occurred here. So we use all the way from the manual system all the way up to a Positive Train Control system in order to ensure that we operate safely, and we do run a safe railroad.

Ms. BROWN. Mr. Hart, other than Positive Train Control and the cameras, the facing cameras, what are some of the other safety measures do you think we need to put in place?

Mr. HART. Thank you for the question. We have heard lots of talk about fatigue, and we are looking into that. Infrastructure is always an issue in terms of the maintenance and the state of good repair. We always are looking at that. So we are looking at the totality of circumstances. The best situation is for the train to stay on the track in the first place, and we want to make sure that happens. Then we want to provide some viability for the passengers if the train doesn't stay on the track.

Ms. BROWN. Ms. Feinberg, you know, you all acted quickly, and I want to thank you all for that. Do you think there is additional training that the employees need?

Ms. FEINBERG. That is something that we are taking a look at now. When I referred to the potential—the package that we are putting together that would address potential human factors, that is something that we will be taking a close look at.

Ms. BROWN. Mr. Pierce, what are some of your concerns about the training of employees for a disaster? And I want to commend that the employees did an excellent job. You know, I was being—it was being monitored. I started getting calls as soon as it happened, and I want to thank you for that. But what additional training do you think the employees need a for disaster?

Mr. PIERCE. I think the training that the employees receive is, in large part, the normal operations type training. Disaster training is obviously something that we don't hope we will ever have to experience. I am not sure exactly to what extent the difference is as to how much actual accident-type training that the employees are receiving on Amtrak right now. I would have to defer to Mr. Boardman on that one.

Ms. BROWN. Mr. Boardman.

Mr. BOARDMAN. So what Amtrak does today, it has emergency management system. We are working in concert with first responders up and down the corridor and across the country with police departments. And we have an incident command structure that was a requirement in the PRIIA law that we have a family assistance program. We have worked with the NTSB to make sure that we stand that up properly. And so we depend on those first responders in the community such as—and I talked about it earlier—Philadelphia in this particular case.

But we have an ongoing good relationship with them, with the FRA, and with NTSB to make sure we have the proper training and disaster drills across the country.

Ms. BROWN. My time is running out, but what I would like from each of the members in writing, what are some of the infrastructure projects that we need in the Northeast Corridor like the Baltimore tunnels and other things to make sure that we in Congress are doing what we need to do? Because when my colleagues try to imply that money is not an issue, money is an issue, and some of the tunnels—and we went up on the train, and we talked to people along the way. And we know that there are many tunnels and infrastructure conditions that need to be upgraded.

Mr. DENHAM. Mr. Boardman, I would ask for a quick response.

Mr. BOARDMAN. We will provide that list for you, Congresswoman.

Mr. DENHAM. Thank you.

Mr. Rokita, you are recognized for 5——

Ms. BROWN. Mr. Chairman, I would like to not dismiss Mr. Boardman, but I would like it for Mr. Hart, Ms. Feinberg, and Mr. Pierce, what are some of the infrastructure things you think you can access in the Northeast Corridor.

Mr. DENHAM. We will provide each of you the questions in writing, but we would ask for a response on infrastructure needs from each of you.

Ms. BROWN. Thank you.

Mr. DENHAM. Thank you, Ms. Brown.

Mr. Rokita, I recognize you for 5 minutes.

Mr. ROKITA. I thank the Chair. I thank the witnesses for the testimony this morning.

Following up on some questions that might have already been asked, I want to go to you, sir, about what seems to be, I think in your testimony, a right to privacy in the locomotive cab with regard to inward-facing cameras. Is that the position of the brotherhood or not?

Mr. PIERCE. I didn't say right to privacy. There are privacy concerns about the storage of data. I don't think anybody in this room wants to see their last minutes, if they are killed in a locomotive collision, floating around on YouTube, to be quite honest with you. There are steps that need to be taken to make sure that the data is protected and that the data is used for what everybody seems to think it should be used for, which is post-accident testing.

Mr. ROKITA. Right. But it seems like that is covered in other modes of transportation and other industry. Surely that could be worked out. You agree. Right?

Mr. PIERCE. To date, it has not been worked out. There is no regulation. FRA has started the rulemaking process on cameras.

But until there is a regulation, the railroads are running programs, each one independent of the other, and the data storage is something that is different on every railroad.

Mr. ROKITA. Right. But however gruesome the photo or whatever the situation might be or whatever goes on YouTube, when you are on the job, you don't agree that there is a right to privacy, do you?

Mr. PIERCE. Well, you are kind of putting words in my mouth. Our concerns are many, but——

Mr. ROKITA. It is a yes or no question. I think you might have answered it already.

You don't agree that there is a right to privacy. Correct?

Mr. PIERCE. I don't see it as a yes or no answer. It is more complicated——

Mr. ROKITA. There is a right to privacy when you are on the job in a locomotive cab.

Mr. PIERCE. There should be a reasonable application of the installation of cameras, and we are willing to pursue one. We have not been afforded that opportunity yet.

Mr. ROKITA. Do airline pilots have a right to privacy in anything recorded on the black box or anything on the ATC communications or anything like that?

Mr. PIERCE. It is my understanding that FAA actually made a presentation to the RSAC group about the model that the airline industry uses and that was at our recommendation because we would embrace that. It has not been offered to us.

Mr. ROKITA. OK. But you would embrace it if that was the case?

Mr. PIERCE. Yes.

Mr. ROKITA. OK. Great.

Following up on Congressman Perry's line of questions on the $800 billion spent on stimulus projects or other things regarding—I am sorry. I have a head in the way.

Mr. Boardman, do you have any experience or recollection or any kind of numbers to give us regarding how much of that $800 billion was spent on PTC on your railroad?

Mr. BOARDMAN. $800 billion?

Mr. ROKITA. Yeah. Part of the stimulus package.

Mr. BOARDMAN. No.

Mr. ROKITA. Any of the subsidized money that was given over the last——

Mr. BOARDMAN. $800 billion is not a number that rings with me that—of course, Amtrak would love to have $800 billion. Don't get me wrong. But, no, we don't——

Mr. ROKITA. Any stimulus funds whatsoever. How much was spent on PTC, in your estimation?

Mr. BOARDMAN. We did not spend any stimulus money on PTC, per se, unless there was some particular part of another project that we are doing.

Mr. ROKITA. Why not? It has been the clear testimony——

Mr. BOARDMAN. Because that wasn't what it was used for. It was looking for real investment in the Niantic Bridge, for example and, also, rebuilding a whole section of our railroad——

Mr. ROKITA. Was there a legal prohibition, in your experience, against using stimulus funds for——

Mr. BOARDMAN. They were really looking for infrastructure projects.

Mr. ROKITA. Was there a legal prohibition? Do you know?

Mr. BOARDMAN. I don't know.

Mr. ROKITA. And, Ms. Feinberg, can you add anything to that? Do you think there is a legal prohibition against using stimulus funds for PTC?

Ms. FEINBERG. I am sorry. I don't think that there is a legal prohibition against—I don't think so.

Mr. ROKITA. Why do you think we didn't use funds for PTC, if that is the case? Or do you have any estimation of the amount of

stimulus funds that might have been used in any kind of PTC work?

Ms. FEINBERG. To be honest, to take all of the stimulus dollars and give it to Amtrak and Class I's to implement PTC, I am not sure that that was something that occurred to anyone. I don't think it was even discussed.

Mr. ROKITA. Really? Because it is being discussed like it was a no-brainer high priority that has been wanting to be done for decades, since 1969.

And this never occurred to anyone, that you might use some of these funds for that?

Ms. FEINBERG. Well, it was the Congress that mandated the implementation of PTC by the deadline that we are approaching now.

Mr. ROKITA. Right.

Ms. FEINBERG. I do not know if it was a subject that you all discussed at the time.

Mr. ROKITA. No. I am asking if you discussed it, anyone in the industry. The industry and the regulators are all testifying here today that this was such an important provision whose concept came about—in 1969 I think is what Ranking Member DeFazio stated.

So in all that interim time and then having the stimulus money, no one thought to use that money for PTC or—and now my question is: If so, how much was used for PTC?

Mr. DENHAM. Ms. Feinberg, we have asked for a quick response. But this is another one we would ask in writing: With all of the stimulus dollars, why wasn't PTC a priority during that spending?

Mr. ROKITA. And, Mr. Chairman, if you can get a date from the witnesses as to when they can respond.

Mr. DENHAM. Absolutely. We will get that at the final testimony.

Mr. ROKITA. If we could get it on the record, that would be great.

Mr. DENHAM. Ms. Feinberg, do you care to have a quick response?

Ms. FEINBERG. I am sorry. Yes. We are happy to get that to you all.

Mr. DENHAM. Thank you.

Mr. Nadler, you are recognized for 5 minutes.

Mr. NADLER. Thank you.

Mr. Boardman, of the $800 billion of stimulus funds, isn't it true that Amtrak got about $1.1 billion total?

Mr. BOARDMAN. I am sorry, sir?

Mr. NADLER. Of the $800 billion in stimulus funds, $240 billion of which was tax cuts, not spending, by the way, isn't it true that Amtrak was allocated $1.1 billion; so, we are talking about $1.1 billion, not $800 billion?

Mr. BOARDMAN. I think it was $1.4—$1.3 billion.

Mr. NADLER. $1.3 billion.

And, basically, Congress instructed you to spend that on projects that were ready to go as fast as possible, infrastructure projects. Is that correct?

Mr. BOARDMAN. That is correct.

Mr. NADLER. And you spent that on what, in broad terms?

Mr. BOARDMAN. Niantic River Bridge and some additional infrastructure projects.

Mr. NADLER. Infrastructure, bridges, and so forth, which, I assume, had you not spent it on those, there would have been safety problems?

Mr. BOARDMAN. Yes.

Mr. NADLER. OK. Thank you.

Now, Amtrak has requested $36.4 million to implement PTC in fiscal year 2016. Now, does this go beyond finishing the implementation of PTC by the end of this calendar year?

Mr. BOARDMAN. Yes. This is off the Northeast Corridor. This isn't on the spine of the corridor. The spine of the corridor will be done by the end of December, but we have other work that we need to get done.

Mr. NADLER. OK. And could Amtrak have implemented PTC sooner if it had more Federal funds?

Mr. BOARDMAN. Had they come a while ago, yes, but not now.

Mr. NADLER. No. But if Amtrak had had more Federal funds a year or 2, 3, 4 years ago, it could have implemented——

Mr. BOARDMAN. When we would first started, if we had had a dependable amount of money to move forward, yes.

Mr. NADLER. OK. Now, to switch topics for a moment, the tunnels into New York have been described as ticking time bombs because of damage from saltwater during Hurricane Sandy.

What is the status of those tunnels? What would happen if they were to go out of service? And how much funding is necessary to prevent that from happening?

Mr. BOARDMAN. Well, we found out this winter what would happen if they went out of service because we had so much ice that we had regular ice patrols that had to knock down the ice in one tube or the other.

And when that happened, you went from being able to move 24 trains an hour down to 6 trains an hour. So we got a lot of complaints from New Jersey Transit and from Amtrak riders that they had to wait outside one of the tubes in order to get into New York City. So that is exactly what is——

Mr. NADLER. Going from 24 trains an hour to 6 trains an hour, as the only rail access into New York City from New Jersey, would have a significant effect on the economy?

Mr. BOARDMAN. Absolutely.

Mr. NADLER. Can you quantify that at all?

Mr. BOARDMAN. I will for you. I will get back to you with that answer.

Mr. NADLER. Please.

Now, I understand that Amtrak has a $21 billion backlog of projects on the Northeast Corridor just to achieve the state of good repair. Is that accurate?

Mr. BOARDMAN. That is what the commission developed and produced. Yes.

Mr. NADLER. Do you have any source of funding for that $21 billion?

Mr. BOARDMAN. No more so than what we get each year.

Mr. NADLER. And how much is in the budget that the House just passed?

Mr. BOARDMAN. $1.39 billion was what we had last year, and I think that is——

Mr. NADLER. No. No. But that is the total. That is not just for back projects on the NEC.

Mr. BOARDMAN. No. Not for just the projects on the NEC.

Mr. NADLER. So of the $21 billion necessary to just get up to a state of good repair on the Northeast Corridor, how much was appropriated for that purpose or available for that purpose in the amount of funds voted by the House a couple weeks ago?

Mr. BOARDMAN. There were some dollars that were specifically identified for advancing our Gateway Project, but not capital dollars for us to actually build it.

Mr. NADLER. No capital dollars at all. OK.

So zero over 21. That is a pretty good ratio.

Now, Ms. Feinberg, we have heard that Amtrak will have the PTC, Positive Train Control, in place by the end of the year, at least on the spine and a little later elsewhere.

But what is the status of PTC implementation on other passenger rail lines, like Metro-North and Long Island Rail Road of New York and other commuter rails? And what would it take for commuter lines such as those in the New York area to meet the deadline?

Ms. FEINBERG. They are very much struggling to meet the deadline. We just completed a loan to the MTA for almost $1 billion to assist with their PTC implementation. That does not reach the deadline. That will go beyond the deadline. But——

Mr. NADLER. And do we have any estimate as to when the commuter rails across the country are likely to be able to implement PTC?

Ms. FEINBERG. It varies dramatically, but I would say anywhere from 2016 to 2018 to 2020.

Mr. NADLER. In other words, 1 year to 2 to 4 years after the deadline. And we know the possible safety repercussions.

Let me just say that the transportation appropriations bill on the floor this week includes no money for commuter lines, such as Metro-North and the LIRR, to install PTC. Amtrak funds this out of Federal capital grants, which were just cut by $290 million.

Despite the fact that there is a $21 billion backlog to achieve a state of good repair in the NEC, we spend about $50 billion on highways and about $17 billion on aviation and $1.2 billion on rail.

There is something very wrong with the appropriations process. And for us to sit here and not understand that the fact that the Congress has been starving Amtrak has a large role to play in what we are talking about is putting our heads into the sand.

I yield back.

Mr. DENHAM. Thank you, Mr. Nadler.

Mr. Costello.

Mr. COSTELLO. Thank you, Mr. Chairman.

Let me start with Ms. Feinberg. And I want to thank you for your time and attention the day following the tragedy, when Chairman Denham, Ranking Member Capuano, and myself went and visited the site.

My question to you relates to 49 CFR, part 220, Restrictions on Railroad Operating Employees' Use of Cellular Telephones and Other Electronic Devices, the final rule in which the Secretary essentially delegated to you the duties to exercise the authority to

prohibit the use of personal electronic devices that may distract employees from safely performing their duties.

The FRA study found railroad operating employees were increasingly using distracting electronic devices in a manner that created hazards. And I am going from the Federal Register dated Monday, September 27, 2010.

And I found this part particularly interesting, and it forms the basis of my question: "Relating to access to employees' personal cell phone records, FRA has decided that a provision mandating that railroads require operating employees to provide access to personal cell phone records in the event of an accident is unnecessary for FRA purposes. Instead, FRA currently uses its investigative authority to obtain personal cell phone records when appropriate."

Is that what you are doing now? In other words, it is through your investigative arm and that is how you are getting the personal cell phone records?

Ms. FEINBERG. That is correct. So following the accident, we just subpoenaed those records.

Mr. COSTELLO. And we have talked a little about inward-looking cameras, I think is the term.

If you had inward-looking cameras, would the operating engineer—at that point in time, you would be able to ascertain whether or not a personal cell phone was being used. Correct?

Ms. FEINBERG. That is one of the purposes of an inward-facing camera.

Mr. COSTELLO. Are there concerns that, without the inward-facing camera there—I did also go through this rule in detail. There are times throughout a ride when an operating engineer would legitimately be able to look at their personal cell phone?

Ms. FEINBERG. The regulation is that the phone should be off and stored.

Mr. COSTELLO. Should be. Right. OK.

If we had an inward-facing camera, we would know already if that were the case?

Ms. FEINBERG. Yes. And the inward-facing camera I think would also provide us information after an accident which would be useful.

Mr. COSTELLO. Right. OK.

Ms. FEINBERG. We wouldn't be needing to have this debate at the moment.

Mr. COSTELLO. And so my question next turns to Mr. Pierce.

I understand that you were, I think, making a distinction between privacy concerns and a right to privacy. I sort of intuited that from some of your testimony and some of the questions that you were answering.

Can you talk a little bit more about this reasonable implementation? Because I am a little concerned when we are talking about the privacy concerns of an individual operating engineer who would be taped while they are in the performance of their duties. Because, essentially, you have to balance that against the public safety considerations of the 200- or 300-plus passengers who were in the train.

And I think a lot of us are concerned that your testimony seems to suggest that we need to really focus on the privacy concerns of

the operating engineer and not some of the public safety assurances and some of the information that would be elicited if you had the inward-facing cameras moving forward.

So I want to give you an opportunity to sort of share with us a little bit more what it is about these privacy concerns that you hold so dear on behalf of your membership.

Mr. PIERCE. Well, thank you.

I do want to first comment about the comments that were made earlier about litigation when cameras started. The unions didn't actually go to court to block cameras. KCS Railroad took us to court to install them. So I think the record needs to be clear on who actually started the litigation effort in order to install cameras.

The cameras installed so far in the country have been on freight railroads, primarily on Class I properties. And those cameras run 24/7, whether the train is moving, whether the train is stopped, and we have crewmembers that could sit on a train for up to 6 hours without moving.

We have asked that the railroad shut the cameras off if there is no safety-sensitive duties being performed, and they have refused. That is a privacy concern.

Mr. COSTELLO. OK. But what about when they are operating?

Mr. PIERCE. Right now they run 24/7. The parts that we have taken exception to I am trying to identify. We haven't said that there should be an outright prohibition. We have said that the implementation has been done in a way that there are disputes over it.

Mr. COSTELLO. Do you believe that there is a sound public policy in favor of having an inward-facing camera on the operating engineer at all times during the moving of a passenger rail?

Mr. PIERCE. I know that that is where the industry is headed.

Mr. COSTELLO. That could be a yes or no answer.

Mr. PIERCE. Well, but just so you know, all of the activities of the engineer are already recorded on an event recorder through the technology of the control stand. All we are going to get is a picture of what he does, yet we already know, with the exception of the cell phone use, what he does.

Mr. COSTELLO. I see my time is up. Thank you, Mr. Chairman.

Mr. DENHAM. Thank you, Mr. Costello.

Mr. Maloney.

Mr. MALONEY. Thank you, Mr. Chairman.

Just to round out the point on funding—well, first of all, Ms. Feinberg, congratulations on being named the future Administrator. I want to point out that, throughout this process in my time on the committee, you have been exceptionally responsive, incredibly helpful to us in so many ways, and I am very excited to see that you are going to be continuing in this role.

On the point on funding, the point is that, in the GROW AMERICA Act, you included $800 million for commuter rail systems to help them speed up the implementation of PTC. Right?

Ms. FEINBERG. Correct.

Mr. MALONEY. The point is it is not just Amtrak we are worried about. We are worried about all kinds of commuter systems that aren't going to have the money to do this on time. Right?

Ms. FEINBERG. Correct.

Mr. MALONEY. In fact, Amtrak is the only that has their act together on this. Right?

Ms. FEINBERG. Amtrak is the only one that has their act together. I would say Metrolink is also in good shape and SEPTA is impressive.

Mr. MALONEY. Right. So one of the great tragedies of this accident is that the fact is that Amtrak is in the best position of all the major rail systems we are concerned about to implement this life-saving technology.

And there are real and important questions about what happened here and why, but among them is not some issue of Amtrak lagging behind other systems in its implementation of PTC. Isn't that right?

Ms. FEINBERG. That is correct. They are ahead of everyone else.

Mr. MALONEY. And isn't it, therefore, again, beside the point to talk about what Amtrak is doing with respect to the Federal funding?

The point is that the Federal funding is absolutely critical for the other systems, like Metro-North, where the Spuyten Duyvil crash we know would have been prevented by PTC. And I want to thank you again for approving a $960 million loan for Metro-North to get that system moving faster with the installation of PTC. Right?

And, in fact, you worked with us closely on my legislation included in the passenger rail bill, with the assistance of Mr. Denham and others, so that we could make explicitly clear that RRIF funding is available for all these systems because money is the issue. Right?

Ms. FEINBERG. Correct.

Mr. MALONEY. Right. And of all the people who ought to be apologizing for these accidents that keep happening because we don't have the safety systems in place, the United States Congress maybe ought to be at the top of that list. Wouldn't that be fair to say?

Ms. FEINBERG. I think that would be fair to say.

Mr. MALONEY. And I think that, when Mr. Boardman comes in here, who is clearly heartsick over this episode and who is doing everything he can and is going to meet this deadline and expresses his heartfelt regret, it might be nice if somebody on this committee expressed a heartfelt regret of the United States Congress for not having its act together in this area and so many others where the safety of the American people is being compromised because we are dithering instead of investing in our own country. Isn't that fair to say?

Ms. FEINBERG. Yes.

Mr. MALONEY. Thank you.

And we have got 30 accidents and 69 deaths and 1,200 injuries and this is the first one on Amtrak because we haven't had one on Amtrak like this in a quarter century. Isn't that right?

Ms. FEINBERG. That is correct.

Mr. MALONEY. So where the funding is most needed is where most of the deaths and most of the injuries are occurring. Isn't that correct?

Ms. FEINBERG. That's right.

Mr. MALONEY. Thank you. So, so much for whether funding matters for safety.

Now, I just have a couple specific questions. Mr. Boardman, maybe you can help me out.

You said that the northbound trains approach at 80 miles an hour in this junction and the southbound trains approach at 110 miles an hour and, so, they installed the system where they knew they had to slow down at least to get to the derailment speed of 98 on the southbound side.

But isn't, in fact, the required speed through that corner 45 miles per hour when you slow down? In other words, you don't just slow down to a speed, you know, equal to or less than the derailment speed. You actually go down about half of it. Right?

Mr. BOARDMAN. We go down to a 50-mile-an-hour speed for a safety measure, from the 98.

Mr. MALONEY. And so can you help me understand, then. If that is the case, the recommended speed going northbound, even though the approach is below the derailment speed, it is not recommended that you take it at 80 even though you won't derail until 98. Right?

Mr. BOARDMAN. No. And we have been going around that corner since the 1930s in the same construct that is there without this code change.

Mr. MALONEY. But at what speed should an engineer take that corridor——

Mr. BOARDMAN. At 50 miles an hour.

Mr. MALONEY [continuing]. Northbound? 50.

Mr. BOARDMAN. Yeah.

Mr. MALONEY. And so it was just an oversight not to put the ATC system there to force the reduction in speed to 50?

Mr. BOARDMAN. No. What had happened, because of the Back Bay incident, the entire community of safety folks, along with the regulator, looked at what was reasonable for us as an industry to do.

And what was reasonable was to make sure that we put in six locations a code change—because the only code change you could really do was down to 45 miles an hour—and that was where you were approaching at a speed that would overturn the train in the corridor.

Mr. MALONEY. I see. I see. And that is what we are working on now, is we are just going to close that gap.

Mr. BOARDMAN. Yes.

Mr. MALONEY. Last question. And just a couple of seconds left.

Mr. Hart, could you just tell us again in plain English why we don't know whether this operator was on the phone 3 weeks after the accident. You said it was a time zone issue? Can't we just get the records? I mean, do we have the records? And, if so, wouldn't we know whether he was on the phone?

Mr. HART. We do have the records. The engineer was very cooperative. He even gave us the password to his cell phone.

As we peeled the onion, we found more and more complicated issues relating to the fact that texting was on one time zone, the voice calls were on another time zone, there were duplications in the data, and other factors. So it turned out to be far more complicated than anybody anticipated.

Mr. MALONEY. But we will be able to determine beyond peradventure whether the phone was being operated at the time of the accident or shortly before?

Mr. HART. Yes. We will be able to verify the accuracy of that. Because obviously that is very, very crucial, to get that right.

Mr. MALONEY. All right. And thank you, sir, for the extraordinary work your agency does.

Mr. HART. Thank you.

Mr. MALONEY. I have seen it up close in the Metro-North crash, and it is really extraordinary how professional and how efficient you guys are.

Mr. HART. Thank you.

Mr. MALONEY. So thank you, all.

Mr. DENHAM. Thank you, Mr. Hart.

Mrs. Comstock.

Mrs. COMSTOCK. Thank you, Mr. Chairman.

I want to follow up on that. After 3 weeks, I have to say I am very frustrated that we don't have a timeline today in any way, shape, or form. To the extent we have one, it indicates the train departed at 9:10 and then the crash is at 9:21.

So in terms of the phone records, to follow up on that, since the requirements say that it should be turned off and stored, do we know if the phone was turned off and stored during that 9:10 to 9:21 timeframe?

Mr. HART. What we know is that there was use of the phone on that day, May 12. What we don't know with certainty are the specifics that will address your question.

Mrs. COMSTOCK. OK. But like, you know, I just texted back my daughter, "Yes. I can baby-sit on Friday," you know, 11:42. That is on my phone now. Now, if it was a California phone, I guess it might say 8:42 and then you could figure it out.

I mean, 3 weeks after, why can't we take those 11 minutes and have a timeline for the victims and the families to have that type of information? I just don't understand what the holdup is.

Mr. HART. It has been far more complicated than any of us anticipated to be able to not only get the record from that phone, but then also to verify with the other source——

Mrs. COMSTOCK. But was the device turned off?

Mr. HART. We don't——

Mrs. COMSTOCK. Because if the device was turned off, then you could not have used it between 9:10 and 9:21. Right?

Mr. HART. One of the things in determining the timeline in that day is when was the device turned on and when was it turned off.

Mrs. COMSTOCK. But just given the 3 hours in California, your timeline would have certain limits. I mean, if he hadn't used the phone within certain hours, you would know whether it is possible or not.

Like if my phone said 8:42 instead of 11:42, then you would know there was an issue. But if it said 7:42, then you would know it is not possible. So I am just trying to understand why this is so complicated.

Mr. HART. Well, for example, we found discrepancies within the carrier's own time systems in which it didn't agree with itself. So

we have got a lot to work out that is far more complicated than we anticipated.

Mrs. COMSTOCK. OK. Well, then, how much would it cost us to not allow an engineer to have a phone in the cabin?

Mr. HART. I couldn't speak to that question.

Mrs. COMSTOCK. Would it cost anything?

Mr. HART. We don't deal in the cost ramifications. We are looking at——

Mrs. COMSTOCK. No. But my understanding is the regulations say that the railroads have the right to implement their own more stringent rules.

Why can't we today just say you are not allowed to have your personal devices in the cabin, period? Just like when we go to classified briefings, it is not a trust system. We can't bring it in. Why can't we do that today?

Mr. HART. I would defer on that question to Ms. Feinberg.

Ms. FEINBERG. Railroads can certainly put that into place.

Mrs. COMSTOCK. That would not be a cost issue, would it?

Ms. FEINBERG. I would not think so.

Mrs. COMSTOCK. OK. Would you all feel safer if someone did not have a device? We wouldn't be 3 weeks later trying to tell people whether or not they had a device and were using it at that time?

Mr. HART. Well, it would certainly make our investigation easier if we didn't have to look into this, but we do have to look into it and——

Mrs. COMSTOCK. But if we implemented a policy that just said don't have the devices in there, period. If you need to use a device, you step out of a cabin. You do whatever. You use it when you are stopped. But it cannot physically go in there. Is there an issue about—why isn't that done?

Mr. HART. Again, I would have to defer to the regulators and to the railroads on that.

Mrs. COMSTOCK. Does anyone think there would be a cost related to removing personal devices from the cabin?

Mr. PIERCE. Use of the devices is already prohibited. You are talking about an additional prohibition, but I am sure that the NTSB would also investigate compliance with that prohibition just like they do with today's prohibition.

Mrs. COMSTOCK. OK. And what kind of compliance issues are there? What kind of spot checks are there right now to know, short of an accident, whether someone's using their phone or texting during their time in the cabin?

Mr. PIERCE. Certain locomotives now are equipped with cell phone detection equipment. It can be detected and——

Mrs. COMSTOCK. Did this cabin have that detection so that they could detect it?

Mr. PIERCE. I don't believe so.

Mr. HART. I don't know the answer to that at this point.

Mrs. COMSTOCK. It seems like the no-cost safety solution here is today to say don't bring them in.

Mr. HART. What is detectable is the signal in and the signal out. What is not detectable so easy is was somebody manipulating the phone, for example, by using an app, but not actually sending a signal at that moment.

Mrs. COMSTOCK. OK. But you did find the cell phone was in the cabin that day?

Mr. HART. Yes.

Mrs. COMSTOCK. And was it turned off or not?

Mr. HART. I do not know the answer to that.

Mrs. COMSTOCK. Does anybody know if it was turned on or off? How could we not know that at this point? That is the regulation. So if it was on, that was a regulation violation. Right?

Mr. HART. I don't know it at this moment.

Mrs. COMSTOCK. Do any of the witnesses today know that?

Ms. FEINBERG. I mean, I would just say that, as, you know, the NTSB leads the investigation, we partner with them and we also do our own investigation.

There has not been a concern on the FRA's part that we will not figure this information out. It is a little complicated. It is more complicated than——

Mrs. COMSTOCK. I understand the complication, but this is something that is so easy to find out quickly and then we could know—like this action could've been taken a day after.

Hey, until we know—we know there was a cell phone in there. Why don't we just say you are not going to bring your cell phones in the cabin anymore?

Because unless someone can tell me there is a safety concern about not having—my grandfather worked on the railroads for 40 years and he safely worked on them for 40 years without a cell phone.

So I am just trying to figure out, is there a cell phone issue here that you need to have it in the cabin for safety purposes?

Mr. DENHAM. The gentlelady's time is expired.

We will present these questions in writing as well.

Mrs. COMSTOCK. Mr. Chairman, I really hope we can get a timeline very quickly because I just find it very frustrating not to have some of this basic information. That is not a judgment thing. It is just facts. And then we can explain it and make decisions. But people are talking about safety concerns and where we are doing these things and there is no cost issues. We are sitting around after 3 weeks not doing something about it.

Mr. HART. We will develop a very precise timeline.

Mrs. COMSTOCK. And what do we have——

Mr. DENHAM. The gentlelady's time is expired.

Ms. Esty, you are recognized for 5 minutes.

Ms. ESTY. Thank you, Mr. Chairman.

And I want to thank all of our panelists today for your hard work.

As a representative from Connecticut, I have to say, you know, the folks I represent are concerned, and we are talking about thousands of people in my district who ride the lines every day to get to work.

And so it is in our shared interest for their safety and, also, for the integrity of the system. I mean, when we talk about numbers of deaths, confidence in the system is vital. So I want to start, in part, with that.

And, again, I extend my congratulations to you, Ms. Feinberg. You have been exceptionally responsive and helpful, and I hope that the Senate moves rapidly on your confirmation.

There has been a lot of things that have been talked about in today's hearing, and I want to make sure we are getting clarity on the record, particularly because of this issue about Positive Train Control and lines owned by Amtrak as well as all the other lines that we have passengers riding on, particularly in the Northeast Corridor.

Is there anything else—and this is for you, Ms. Feinberg—that is needed to get Positive Train Control on all portions of the Northeast Corridor, regardless of who owns the track?

We know we have got funding for and a commitment by Amtrak to meet that, but we have lines owned in Connecticut, substantially, a bit in New York, a bit in Massachusetts.

Is there anything else in terms of funding or authority that is necessary for that?

Ms. FEINBERG. Well, in terms of funding, there are funding struggles throughout the system on PTC. In terms of authority, we are concerned that some railroads will miss the deadline and that we will then lack the authority to force them to implement interim measures that will raise the bar on safety between that moment and when they actually have PTC implemented.

We have asked the Congress for that authority. We think it is appropriate. If the deadline is going to be missed, we want to make sure that the railroads are taking steps to raise the bar in safety before they implement PTC fully.

Ms. ESTY. If you can follow up with us on the specific authority you believe you need. I have commuter lines dropping down from, say, Danbury, dropping down from Waterbury, through New Britain, through Meriden. These are really important for us to check.

Ms. FEINBERG. We will do that.

Ms. ESTY. Also, following up on a question from Chairman Shuster—and it is a similar question—is there any action you need from Congress or authority to follow up on evaluating the safety of these curves?

Obviously, we want to get high-speed rail line. And if we are getting derailments that is well below what, say, the Acela that I take from time to time is running, is there additional authority that you believe you need from us to make that possible?

Ms. FEINBERG. I don't believe that we need additional authority on the curves. Where Amtrak has supplied us with the curves that they are focused on, we are taking a look at that list.

We will go back and forth with them and make sure that we agree on the actions, moving forward, on those specific curves. We are continuing to work on next steps that go beyond Amtrak on curves and speed, and we will have more to say on that in the coming days.

I think there is, going back to Chairman Shuster's question, some frustration that could more have been done following the Metro-North incident. Again, you know, I am not sure that comes down to authority so much as, you know, as regulators, we have very few tools and the tools that we have, they are sometimes blunt instruments.

And so emergency order authority is incredibly narrow and can't be as broad as we want. Safety advisories are recommendations. They don't have to be followed. And the rulemaking process takes years. So——

Ms. ESTY. Thank you.

And for you, Mr. Boardman, I have some concern, given the importance of these accidents, that so much emphasis is being placed just on PTC. I am looking at billions of dollars in infrastructure upgrades.

And, in particular, if you could talk about—how are you going about prioritizing the bridges that are 100 years old and more that the Northeast Corridor runs across these bridges every single day?

And what, if any, help in addition to the additional funding, which I join my colleague and not only seatmate, but adjacent districts, with Mr. Maloney that we need a lot more funding to address this backlog of infrastructure, which is also safety. If a bridge goes down when a train is attempting to cross, that is also a safety concern.

Can you talk a little bit about the prioritization?

Mr. BOARDMAN. Certainly. I think one of the most important things that occurred was in the PRIIA Act, the commission that was established in the Northeast of all the States, the Federal Government, and Amtrak to look at what projects needed to be done, what the backlog was, and how we needed to prioritize for the future.

And a lot of that conversation that has occurred has really identified the projects that need to be done, a lot of them, bridges, tunnels, the major impacts that we need to get done.

They have been identified. In one particular case, we have ready to build the Portal Bridge, which would be about a $1 billion project. So our priority is there for these infrastructure improvements, which will also improve safety. It is in place.

Ms. ESTY. Thank you.

Mr. DENHAM. Mr. Zeldin, you are recognized for 5 minutes.

Mr. ZELDIN. Thank you, Mr. Chairman.

I was actually on the route 24 hours beforehand. I represent New York 1 on the East End of Long Island. Some other Members were traveling with me as well.

And as we are here, I would be remiss if I didn't offer my thoughts and prayers to the families of those whose lives were lost, of those who were injured. It is a terrible tragedy that took place.

I kind of wish that all of the entirety of Congress would be willing to allow us and the families to mourn for Amtrak and for the employees of Amtrak, everyone who was impacted by it. I wish that there was a little more time that was dedicated towards mourning.

Unfortunately, the next day—and I think it is pretty shameful and disgusting—not even 24 hours go by and we have an entire party here in Congress that was blaming a potential future funding cut on an accident that happened yesterday. I mean, I have heard of spin, but this is a first for me.

I mean, literally, you wake up the next morning and, instead of dedicating your day towards mourning the loss of those—I mean, the families that were so greatly impacted, you come onto the floor throughout these halls and you stand in front of the cameras with-

out saying my heart goes out to the family, without offering up any type of emotional remorse—because it is a terrible tragedy that impacted Amtrak—immediately you are blaming a potential future funding cut on an accident that happened yesterday. I would challenge anyone to find an example of this in history. And you couldn't even wait 48 hours to start with the politics. It started the next morning.

The engineer was obviously traveling over twice the speed limit, and that is the reason why there is an investigation. It is very important to Amtrak that they finish the project of getting PTC operational, specifically on the Northeast Corridor. I know that this body passed legislation.

Being from the Northeast and knowing how profitable the Northeast Corridor and the Acela trains are, it is good that we see that money getting reinvested back into the system. I have some colleagues in some other parts of the country who may think otherwise, and that is OK. I am parochial in a way to my home State, my home region.

I came here from New York State. In the State legislature, I served on the Transportation Committee, the MTA, which is the Nation's largest, you know, mass transit system for that locality. And we have heard the Metro-North talked about and the Long Island Rail Road.

We found a way, Republicans and Democrats working together, to try to create a second track between Farmingdale and Ronkonkoma on Long Island for the Long Island Rail Road.

There are infrastructure improvements all over the New York City metropolitan area with the involvement of people of New York City, up in Albany, working with the MTA, working with the unions, trying to figure out how to invest in the infrastructure.

It is also important to note that that Amtrak legislation that was passed by the House discusses the RRIF component. That allows the MTA to apply for the $1 billion in financing.

But the investment can be made—it would be very nice if my colleagues on the other side of the aisle, instead of us trying—and, listen, when we ask, "It is a great idea. How you are going to pay for it?", it is not to get to no. It is to get to yes.

For me personally, I want to be part of the discussion to figure out how we can invest in our infrastructure all across the country. That is what I believe as a matter of principle.

But with my final minute, Mr. Hart, just getting back to you, just so I understand something, are there texts on the phone from 9:10 to 9:21?

Mr. HART. We know that there is text, data, and voice activity that day, and we will develop a specific timeline of when the phone was in use.

Mr. ZELDIN. But on the phone itself, like when you look at the phone and you scroll through texts, it doesn't show a text from 9:10 to 9:21?

Mr. HART. We will have a timeline of that by the time we are done.

Mr. ZELDIN. Because I understand Mrs. Comstock's frustration. And it just seems like something that, you know, if he gives you

access to the phone, you look at the phone and then you know the answer in, like, 5 minutes.

Mr. HART. We were surprised by the complexity of it ourselves.

Mr. ZELDIN. OK. And you can also balance——

Mr. HART. And we are experts at this.

Mr. ZELDIN. I know you are. And, I mean, the entire route has all these—are you getting cooperation from the cell phone companies?

Mr. HART. Yes.

Mr. ZELDIN. Do you have all the cell phone towers, the pings off towers?

Mr. HART. Yes.

Mr. ZELDIN. I mean, it really shouldn't be that hard.

Just so you know, for the families, the real advocacy—the effort on your part to try to get answers and Amtrak's efforts and all of you who are here for that cause, the frustration on our end, too, is just on behalf of constituents and families who are eager. They understand when some things take longer than others, but maybe they just don't understand on this front why we don't have more answers as far as the engineer goes.

Yield back the balance of my time.

And thank you for being here.

Mr. DENHAM. Time is expired.

The gentlelady, Ms. Titus.

Ms. TITUS. Thank you, Mr. Chairman.

I very much appreciate and support all your efforts in the Northeast Corridor, but I would like to shift west of the Mississippi for just a few minutes.

At 11:19 on June 24, 2011, a tractor-trailer driving north on U.S. 95 slammed into the side of Amtrak Train No. 5 on the California Zephyr line. This was at a railroad grade crossing outside the small town of Miriam in rural Nevada.

Now, the driver of the truck was at fault. He had been on duty for nearly 9 hours, I might add. But he failed to heed the train horn and went ahead and crossed the track. The impact of that created a fire. It killed the driver, killed the train conductor, killed 4 passengers, and injured 15 other passengers and 1 additional crewmember.

Now, PTC wouldn't have stopped that, but the investigation that was done by NTSB outlined concerns about side-impact strength requirements for passenger cars and what happens with impact crashworthiness when it comes from the side.

If you look at the report they issued, two recommendations were to develop side-impact crashworthiness standards, including performance validation for passenger railcars, and then, once those side-impact crashworthiness standards had been developed, to require that new passenger railcars be built to those standards.

I would just ask you, Ms. Feinberg—we have had all these studies about train-to-train collisions. Has any research been done on these types of side-collision impacts?

Ms. FEINBERG. Yes, ma'am. We are doing research now. At the NTSB's recommendation, we are doing research now on those side impacts.

Ms. TITUS. Is that it? Can you give me any more information about what that entails or where you see that going? Or will you be making recommendations or changing regulations?

Ms. FEINBERG. Yes, ma'am. That research is ongoing, and we can get your office a full report. I mean, apart from that, we have done a tremendous amount of work on grade crossings generally, which have continued to be a problem for many years and, in fact, are on a slight uptick this year. And we have a multifaceted approach to grade crossings generally, but on side-impact collisions alone, our research is ongoing.

Ms. TITUS. Well, if I could then ask Mr. Boardman—and this goes back to the very first question that Mr. DeFazio asked about buying new train cars—if this study, whenever it gets done, comes with the recommendation that new requirements should be made for train cars that meet some increased standards for side crashes, are we going to get any new cars? How many cars have we gotten? We have heard that they were 40 years old. You look at the pictures of the cars that were so crashed compared to the locomotive. Would you elaborate on that a little bit more.

Mr. BOARDMAN. These are the bilevel cars which have a lower section. I went to that accident site.

Ms. TITUS. I think you were the assistant director or something at that time.

Mr. BOARDMAN. Pardon me?

Ms. TITUS. I realize you were involved in this report for the accident in Nevada.

Mr. BOARDMAN. No. I was the CEO for Amtrak.

I went out there at that time and looked at what happened. It was a double tractor-trailer. The side impact is what killed our conductor, but it was really a singular case, that the back trailer came up and hit the top of the train that did the passenger—or deaths and injuries.

I am not a mechanical engineer. There is a huge problem at that particular location. It was a very strange crash because there was total visibility for the truck that went into the side of the train. And if you were going to protect for that by replacing the equipment, you would have major engineering that would have to occur, and I would have to see whether any such thing could happen.

Ms. TITUS. So you disagreed with the recommendation that they need to look at side——

Mr. BOARDMAN. No. No. I don't disagree with the recommendation at all. I just think it would be a very difficult thing to—we can't retrofit it for it. So it would have to be new equipment. You are probably talking 450 of the bilevel-type cars.

You are talking probably $3.5 million to $4 million apiece for each of those cars. That would be a substantial cost in doing that. And it would take us probably 10 years to make those kinds of changes and deliver new equipment.

Ms. TITUS. What about as you buy new cars?

Mr. BOARDMAN. We haven't bought any new cars in a considerable period of time.

Ms. TITUS. That was my point, going back to Mr. DeFazio's question.

We have heard a lot about spending money for the signaling system, and we have heard about money about infrastructure. But what about all these old cars? What is the plan there?

Mr. BOARDMAN. The plan right now—what we did with the single-level cars and with the locomotives, we are paying for that out of the fares that we receive in the Northeast Corridor.

On the long-distance trains, there is no additional revenue. It is a completely deficit operation, and we don't have those resources to borrow money on the RRIF program or any other way to replace those cars.

Ms. TITUS. And that seems to me to be a problem.

Mr. BOARDMAN. Yes, ma'am.

Ms. TITUS. Thank you.

Mr. DENHAM. Mr. Davis.

Mr. DAVIS. Thank you, Mr. Chairman.

And thank you to each of the witnesses for being here today.

My first question, Mr. Boardman. Going back to earlier statements you made during the Q and A, you had mentioned that there were 6 to possibly 10—if I am doing the math right—vulnerabilities identified similar to what we saw in the Northeast Corridor and the northbound train going toward the curve. And you mentioned that these types of curves existed.

And have you installed code change points at those curves? And, if so, was there a cost to do so?

Mr. BOARDMAN. So you have to go back to the Back Bay incident in 1990. And when that occurred, the safety community got together, the operators got together, to look at what needs to be done to protect ourselves in that case.

And what they identified were six curves on the Northeast Corridor that they needed to treat. And those six curves included the north side of the Frankford curve because the southbound entrance speed at 110 was greater than what the turnover speed was in the curve itself.

Mr. DAVIS. Correct.

Mr. BOARDMAN. And so they put a code change point there.

Mr. DAVIS. Is there a cost to install the code change point there?

Mr. BOARDMAN. I will get to that in a minute.

On the south side, there was not a need to do that because the northbound approach speed was 80 miles an hour. And, therefore, even if that engineer failed to slow, they wouldn't overturn. So there were six places along the way.

Mr. DAVIS. A total of six.

Mr. BOARDMAN. And there is a moderate cost to do anything, as you know, but it is not a major cost.

Mr. DAVIS. What is the moderate cost?

Mr. BOARDMAN. I don't know.

The Automatic Train Control system really provides an idea whether there is something in front of you on the tracks. So the way that you do this code change is you really have a bit of fiction here. You say there is something at the curve, and so that is when you put the code change point in. So it wasn't built to do Positive Train Control.

Mr. DAVIS. OK.

Mr. BOARDMAN. And the other four, where you added up six and four, what we looked at with the FRA emergency order was the change that occurred here in that conditions that exist on the south side—and we put that code change in on the south side—we looked to find out on the Northeast Corridor—we have 300 curves—what conditions—or what curves meeting that condition need to be changed. And that is what we told FRA we would work to do.

Mr. DAVIS. OK. I don't have a lot of time left. I have a lot of questions.

So if you could have your staff get back to me on if you found any other Amtrak corridors with the same issues and when do you estimate you will be done identifying and actually installing code changes on those areas identified as vulnerable.

Mr. BOARDMAN. We would only do this on the Northeast Corridor on the emergency order.

Mr. DAVIS. I mean, I have Amtrak corridors in my State of Illinois.

Are there any other vulnerabilities there that you have identified?

Mr. BOARDMAN. You have them all over the United States because we are mostly on host railroads. And they depend on the expertise of our engineers and how the signaling system work or, if there is no signaling at all—and there are locations across the country where that occurs—they depend on what we call a Form D control point—control system.

Mr. DAVIS. OK. Well, I am going to move on to a different subject.

In a 2012 inspector general report, Amtrak was criticized because, despite the legal requirements to do so, Amtrak did not include the funding requirements for PTC in its 5-year financial plan and annual budget request. And this is directly from the IG report here.

Your engineering and finance departments could not explain this critical omission. Can you?

Mr. BOARDMAN. Well, what we saw in that particular report from 2012 was that they were looking for us to have come to Congress to specifically ask for PTC service, and that wasn't how we operated with with Congress. We had almost like a block grant of capital projects.

We identified—I identified, as soon as I got over there, what it was going to cost for us to meet this requirement by December of 2015, and it was about the safety of that, not about the dollars of that.

Mr. DAVIS. OK. I am reading the report here, and it just said, "Further, a transportation official stated that his departments purposely omitted PTC installation costs on host railroad lines from Amtrak's 5-year plan and annual budget request. He cited his belief that including these costs in the budget would weaken Amtrak's negotiating position with the host railroads," et cetera.

That is concerning to us. But I appreciate the job you do. Thank you for being here. Thank you to all the witnesses.

I yield back the balance of my time.

Mr. DENHAM. Thank you.

Mr. Sanford.

Mr. SANFORD. Thank you.

In deference to my dear chairman, I am going to try and make my comments brief, since I am separating him and each one of you all from lunch. And you guys and gal have been most generous with your time, and I appreciate it.

I would associate my comments with what Congressman Zeldin said just a moment ago with regard to indeed mourning for the loss of life, a very sad day.

But what I think is important in the wake of any sad day or any tragedy is to go in, do the investigation, but to make sure that, in many ways, as a society, we don't overreact in ways that would make the system less sustainable from a financial standpoint, we don't overreact in ways which really impinge upon sort of the cornerstone of the American republic, which is individual liberty, and we don't overreact in ways in which it becomes so constraining so that the practical effect is people saying, well, I am walking.

I guess the safest of all mechanisms would be to put people in those things that you strap into at a public fair. I mean, you are locked in, but from the standpoint of practical effect, you can't use your laptop, you can't talk on the phone, and you would say, I am going to a different mode of transportation.

And with that in mind, it seems to me, in the course of the hearing, two ideas have come out that I think would be dangerous in terms of overreaction to the real-world tragedy that each one of you all have had to deal with.

One is this idea of seatbelts. You know, if you think about it, there is a reason there are seatbelts on the airplanes, which is you have all kinds of vertical and horizontal considerations based on airlift that is well outside the control of the pilot.

We have been in those thunderstorm moments where you are like, "oh, my goodness, what is happening next?" That does not occur on the train. And what we all know is, when a plane crashes, wearing a seatbelt or not, tragically, a lot of people die.

Same thing with school buses. I mean, a lot of kids ride to and from schools daily and, in most cases that I am aware of, certainly in the case of South Carolina, there aren't seatbelts for those kids.

I think it would have dangerous effects—I would love to hear some of your further thoughts on this—if you were to impose seatbelts as a reaction to this real-world tragedy. My sense is it would be a step too far.

The other, I guess, would be directed more to you, Mr. Pierce, and that is this notion of moving to two men in the front of the train. It seems to me it would be an added financial burden to the Amtrak system, which is already straining to the tune of more than $1 billion a year in terms of subsidy and other.

And if you look at the whole notion of moving toward Positive Train Control, the idea is to take out that possibility of human error, which wouldn't be, frankly, truncated or eliminated if you move to a two-man system up front.

I think it is important, what you all have done at the Amtrak level to move to this notion of inward-facing cameras. I mean, I think that that can watch out for human error. But I think that that would be a step too far as well.

Any thoughts on either one of those two as steps too far?

Ms. FEINBERG. I mean, we are moving ahead with inward-facing cameras. To be clear, this was something that my predecessor was moving ahead with prior to his departure. This committee has many times urged the FRA to make sure that we are making use of the RSAC committee process.

We asked the RSAC to take action on inward-facing cameras. They have been unable to come to a conclusion. We told them last week that we were taking it out of the RSAC and moving ahead.

Mr. SANFORD. You would agree with me on seatbelts or two men in the front?

Ms. FEINBERG. Seatbelts, again, my concern is—the way that I have been briefed on it is that the need to harden the seats in order to put seatbelts in would be more dangerous to passengers than belting passengers in.

So, you know, if the NTSB feels differently, we will start our engagement and conversations with them, but that is my understanding of why seatbelts may not be the best move on a train because it would make people more dangerous.

On two-person crews, you know——

Mr. SANFORD. And I just go back to marketability as well. Oftentimes when I travel to New York—I have a son that works there. I used to work there—the reality is people are up and moving and that is part of why you take the train as opposed to getting on an airplane.

You can be on the phone. You can be having a small group meeting with a couple of other folks. You take that out, I think you begin to lose market share that much further relative to plane travel.

The other, though? I am sorry.

Ms. FEINBERG. On two-person crews, that is something we have been taking a close look at. To be clear, it is less relevant in passenger service because there are multiple people in a crew. So Amtrak had six people on the crew on this particular train. It usually is discussed separately.

But, you know, following the Metro-North incident, one thing we required of Metro-North is for the engineers to be in almost constant conversation with the conductor to make sure that they are talking back and forth, signals, and to make sure that the conductor had access to an emergency brake, which is another good approach.

Mr. SANFORD. I hear my chairman's ever so gentle tap, tap, tap. I get the message, sir.

Mr. DENHAM. I would like to thank the gentleman for being so expedient today and yielding back so much time.

Mr. Babin.

Dr. BABIN. Yes, sir. Thank you, Mr. Chairman. Last, but not least, hopefully.

Thank you, witnesses, for your time and efforts as we try to reach answers to this great tragedy that occurred in the Northeast Corridor. It has been interesting to listen to some of these lines of questioning. It is hard for me to imagine why it is so complicated to get the answer to whether the engineer was utilizing a cell phone at the time of the crash.

It seems like it should be just a simple answer, a simple endeavor, to find out exactly, as Mrs. Comstock said in her line of questioning, hey, during this period of time, did he text? Did he use his phone? It should be there. It is hard to figure out why that is not true.

And in terms of further investigations, there was a news report—several of them—that stated that Amtrak Regional 188 had a fist-sized area of severe damage on its windshield, possibly consistent with that of being struck by some rock or object.

Twenty minutes before the crash of 188, a regional commuter train in the same area had to stop service after its window was hit by an object.

Finally, also around the same time, Amtrak Acela 2173 was apparently also struck by an object while traveling southbound in the very same area.

And there is an old saying that, while once is an accident, twice is a coincidence, and three times is a pattern. Do you think, Mr. Hart, that that applies here?

Mr. HART. We are confident that the train left the station without any windshield damage because that is part of the inspection process before leaving the station. So we are confident that the damage occurred after leaving the station.

What we don't know is whether it occurred before the accident or after the accident. We do know that it was not a result of a firearm. The FBI helped us determine that. But we know that rocks are thrown at train windshields all the time and it can crack the windshield. That could have happened here.

That is a way that the windshield could be damaged, but it also could be post-accident damage as well.

Dr. BABIN. So there has been no revelations or any findings during the investigation of any individual or individuals, culprits, responsible for the damage done to the other two trains as well? Have we found out anything in that regard?

Mr. HART. No. We do not have any information yet in that regard.

Dr. BABIN. Would anybody else, any other panelist, like to address that, the possibility of damage to the windshield?

Mr. BOARDMAN. I think we have from time to time had people throw rocks at our trains. But what is the specific question, sir? In terms of what?

Dr. BABIN. Well, you know, when I rode—I have family that lives in Manhattan and they ride this train. I have ridden the train several times along the same corridor.

And I have remarked to myself and to others that there is certainly a lot of availability, a possibility of vandalism, somebody pitching something over onto a train or firing a weapon or whatever.

And I just wonder, besides the investigation that is ongoing now, has there been any addressing of this possibility by NTSB or any of the other of your agencies?

Mr. BOARDMAN. Well, actually, the way we have been addressing a particular area that we have difficulty, including this one, is with our Amtrak Police Department and the partnerships we have with the police departments along the way.

So as we have been there, we are looking to see where those rocks might have come from. And anywhere else that we have that kind of difficulty on the corridor, we do have an investigation that goes on to see if we can find the when and the where and who that might be tossing rocks.

And it is generally an immature person, some kind of kids or something, that are doing that. And it is not just the trains. It is the buses, the cars, the other kinds of conveyances as well.

Dr. BABIN. OK. Mr. Chairman, I yield back. Thank you very much.

Mr. DENHAM. Gentleman yields back.

Mr. Capuano.

Mr. CAPUANO. Thank you, Mr. Chairman.

Mr. Hart, what time is it?

Mr. HART. 1:06.

Mr. CAPUANO. I have got 1:06. That has 1:05.

Do seconds matter on a train going 100 miles an hour?

Mr. HART. They are very crucial. Yes.

Mr. CAPUANO. And my presumption—correct me if I am wrong—is, at this point as we speak, you have some general knowledge of what occurred with that cell phone. Is that a fair assumption or have you just not looked at it at all?

Mr. HART. Yes. We are looking at it intensively with respect to May 12, that specific day.

Mr. CAPUANO. So you are dotting your i's and crossing your t's before you make a public statement?

Mr. HART. Yes. That is very crucial that we get that fact right, and we are not going to be hurried into getting a wrong answer.

Mr. CAPUANO. And is that the normal course of events for the NTSB?

Mr. HART. Yes. We look at cell phones all the time now because we are seeing cell phone distraction so frequently, unfortunately, in every mode.

Mr. CAPUANO. I appreciate that. And, again, I, like everyone else, I am frustrated the cell phone thing is not settled yet. But I presume you have got some general information about what has happened; you have been reluctant to say it because you are dotting your i's and crossing your t's, which is exactly what I want you to do. Now, it would be nice if you could dot all those i's and cross all those t's now. I hope it is soon. I assume it will be. But, nonetheless, I guess I am on the way.

On seatbelts, Ms. Feinberg, again, you are not as old as I am. When I was a kid, we didn't have seatbelts in the car. We had them, but—I am not even sure if we had them. I take it back.

I used to be thrown in the back of the station wagon. We could play all day long and run around the back of the station wagon, until my mother and father turned around and made the classic threat, sit down and shut up, or I will turn around; I will stop this car. You know, every kid my age heard that. Yet, we put seatbelts in cars. You restricted my freedom. Now I can't run around in the car. You have seatbelts in airplanes. You restricted my freedom, yet I could still get up, go to the toilet, talk to my friends in the back. And I understand fully well that the structure of current trains may not make it much use.

I get that. And I get the fact that it may take us 5, 10, 15 years, to get where we want to be on seatbelts. But at some point, again, on the presumption that seatbelts help, and I presume they do because the automobile industry and the airplane industry have instituted them. And I know some people don't wear them. I am not perfect at it myself. I didn't start wearing my seatbelt until I started screaming at my own kids to put their seatbelt on, otherwise, Dad would get arrested, which at that age they actually cared about. At some age, they are not so sure. And then I realized what a hypocrite I was. I started wearing my own seatbelt. Which, like it or not, it is better for me. I get that. And I am not suggesting we need to put seatbelts in the train now.

But to pretend that seatbelts in a train is somehow going to, you know, restrict people's freedom and drive the ridership down is absurd. And I would simply encourage you, if it is a safety issue—again, I am not the expert. I will listen to the NTSB. If seatbelts can help save lives or stop injuries, then we will should start planning on the implementation of them. If it can't be done on the current train configuration, fine. I get that. But at some point, Mr. Boardman, you are going to order some new trains. When you do, maybe you can implement seatbelts on it. But those are the two things. With that, I just want to do one other thing.

Mr. Chairman, I ask you to consent to include in the record materials from FCC, which shows what the FCC has done to help and/or hinder the railroad's move towards Positive Train Control.

Mr. DENHAM. Without objection, so ordered.

[The information follows:]

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF
THE CHAIRMAN

February 11, 2015

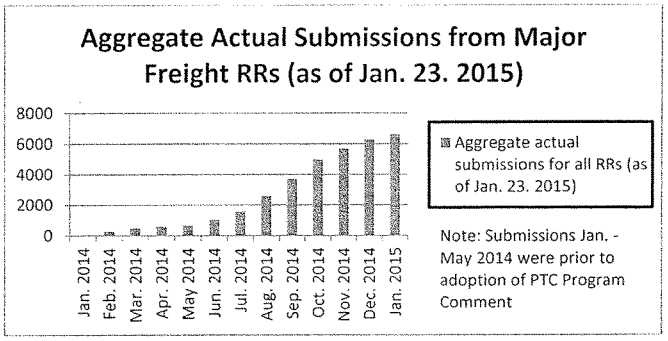
The Honorable Doris Matsui
U.S. House of Representatives
2434 Rayburn House Office Building
Washington, D.C. 20515

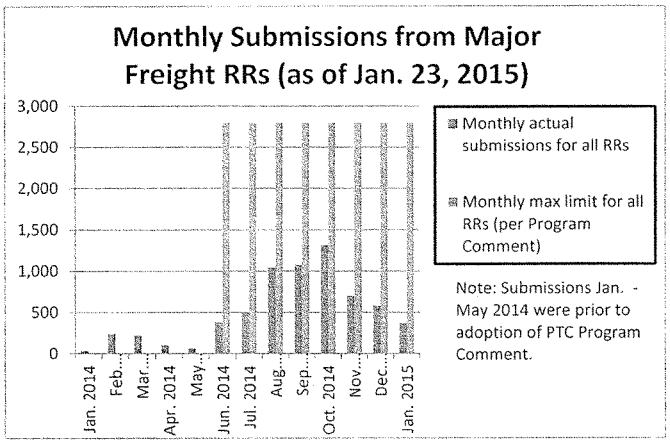
Dear Congresswoman Matsui:

Thank you for your letter regarding Positive Train Control (PTC) and the status of the FCC's efforts to facilitate its implementation. As you know, PTC has the potential to save lives, prevent injuries, and avoid extensive property damage. Expediting PTC deployment remains one of the Commission's highest priorities, and we continue to devote substantial resources towards this goal. I am pleased to inform you that the FCC's capacity to review PTC poles has exceeded by a wide margin the number of poles the railroads have submitted for review.

On May 16, 2014, the Advisory Council on Historic Preservation voted to approve a "Program Comment" that modified and streamlined the FCC's standard procedures for conducting the historic preservation reviews required under the National Historic Preservation Act (NHPA). Concurrent with the approval of the Program Comment, the Commission entered into landmark agreements with each of the seven Class I freight railroads to address the issue of PTC facilities that may have been constructed without environmental and historic preservation reviews required under NHPA and the National Environmental Protection Act (NEPA). As a result of these agreements, the freight railroads were immediately able to start using nearly 11,000 previously constructed poles for PTC deployment. The agreements also require the railroads to provide substantial resources to Tribal Nations and State Historic Preservation Offices in support of historic preservation efforts throughout the country.

Since implementing the new procedures authorized by the Program Comment, the Commission has had the capacity to receive substantially more PTC pole applications than the railroads have submitted. Under the new review process, the Commission can accept applications for up to 1,400 poles from the major freight railroads every two weeks. As of January 23, 2015, the seven Class I freight railroads had submitted for review a total of 6,386 poles, out of a possible total of 25,200. This equates to approximately 25 percent of the Commission's processing capacity. As indicated in the charts below, the number of PTC submissions has been rising since the Program Comment took effect, and the Commission has the capacity to process even more.





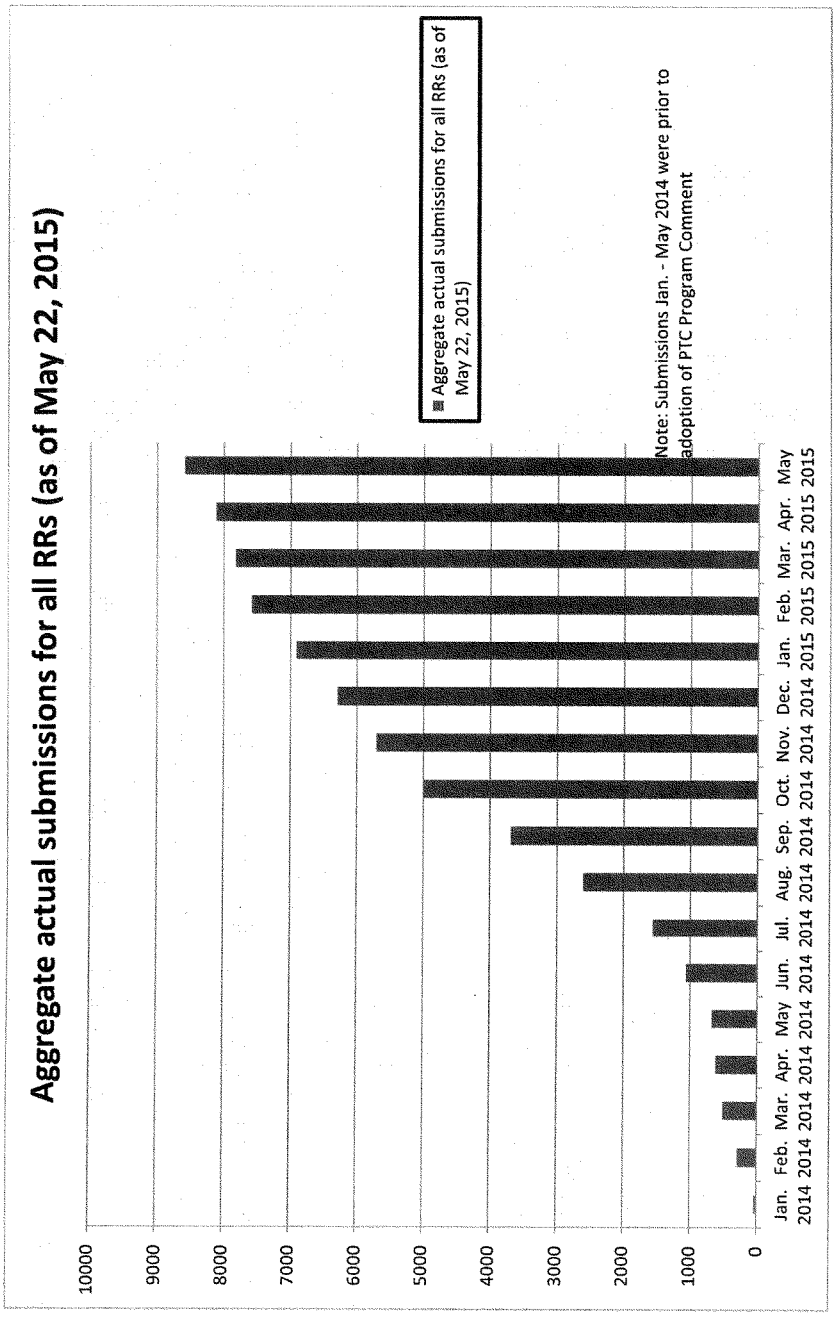
With respect to environmental review under NEPA, Commission staff is working directly with the railroads to ensure expeditious review and processing. Based on our experience to date, the vast majority of PTC poles fall within categorical exclusions under which they are not subject NEPA's submission and review process.

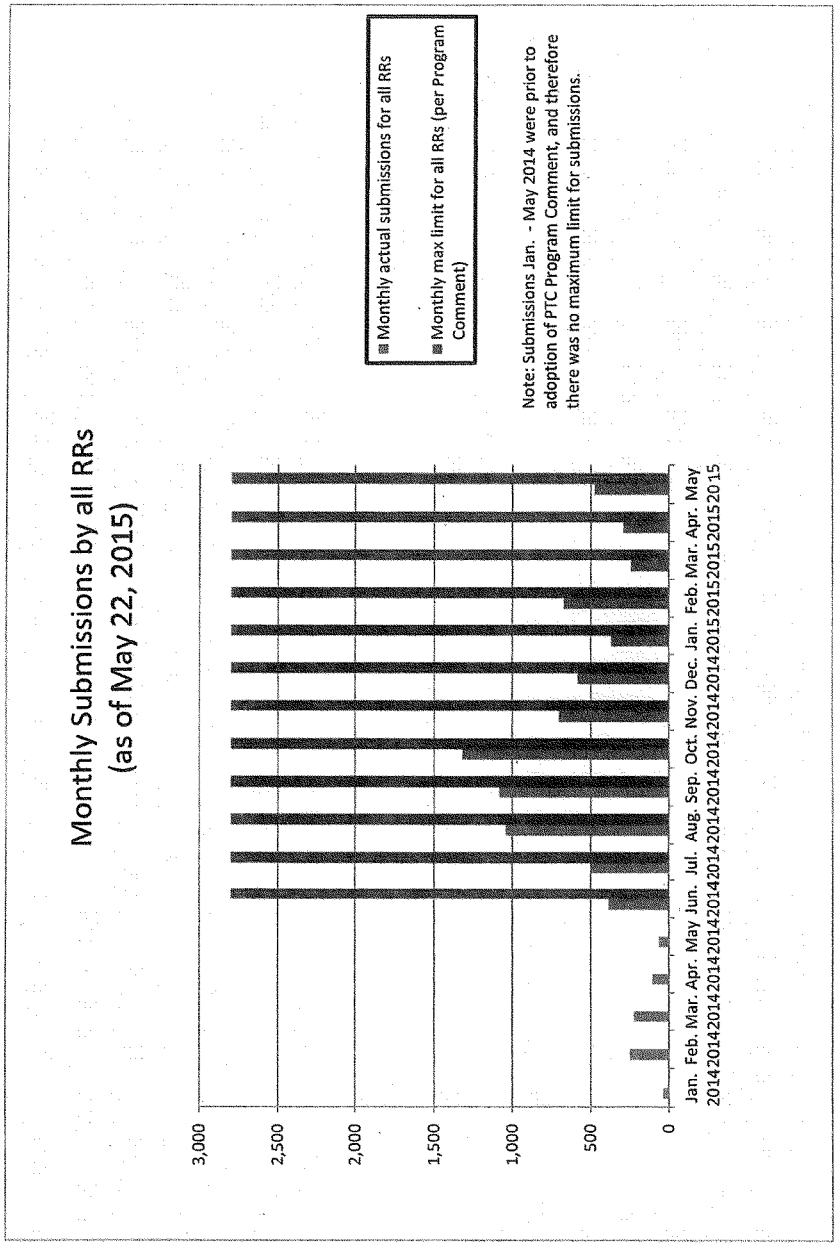
We remain dedicated to helping the railroads comply with their statutory obligations and will continue to work with all stakeholders to facilitate the process to the extent possible.

I appreciate your interest in this important matter. Please let me know if I can be of any further assistance.

Sincerely,

Tom Wheeler


Aggregate actual submissions for all RRs (as of May 22, 2015)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Aggregate actual submissions for all RRs (as of May 22, 2015)
Note: Submissions Jan. - May 2014 were prior to adoption of PTC Program Comment
Jan. 2014
Feb. 2014
Mar. 2014
Apr. 2014
May 2014
Jun. 2014
Jul. 2014
Aug. 2014
Sep. 2014
Oct. 2014
Nov. 2014
Dec. 2014
Jan. 2015
Feb. 2015
Mar. 2015
Apr. 2015
May 2015


Monthly Submissions by all RRs
(as of May 22, 2015)
Monthly actual submissions for all RRs
Monthly max limit for all RRs (per Program Comment)
Note: Submissions Jan. - May 2014 were prior to adoption of PTC Program Comment, and therefore there was no maximum limit for submissions.
3,000
2,500
2,000
1,500
1,000
500
0
Jan. Feb. Mar. Apr. May Jun. Jul. Aug. Sep. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May
2014 2014 2014 2014 2014 2014 2014 2014 2014 2014 2014 2014 2015 2015 2015 2015 2015

Federal Communications Commission
Washington, D.C. 20554

May 29, 2015

Brian W. Higgins
Lawrence J. Movshin
Wilkinson Barker Knauer, LLP
2300 N Street, NW
Washington, DC 20037-1128

RE: **National Railroad Passenger Corporation (Amtrak), Special Temporary Authority**

Dear Mr. Higgins and Movshin:

Effective immediately, the Mobility Division of the Wireless Telecommunications Bureau grants Amtrak's request—filed May 28, 2015—for special temporary authority (STA) to test 66 Positive Train Control (PTC) base stations.[1] Amtrak states that commencing testing now will enable it to deploy PTC on the southern portion of the Northeast Corridor (NEC) as required by the Rail Safety Improvement Act of 2008 (RSIA).[2]

This authority is valid for 180 days subject to certain conditions enumerated below to protect viewers' reception of channel 10 and 13 TV stations.

Background. Pursuant to the RSIA, Amtrak, and most freight and commuter railroads, are required to install and operate interoperable PTC systems by December 31, 2015. PTC systems, once implemented, are intended to reduce the risk of rail accidents caused by human error, including train-to-train collisions, derailments caused by excessive speed, and unauthorized train movements in work zones. PTC wireless communications networks are intended to enable real-time information sharing between trains, rail wayside devices, and control centers, regarding train movement authorities, speed restrictions, train consist, position, speed, and the state of signal and switch devices.

Amtrak has for some years operated a PTC system, called an Advanced Civil Speed Enforcement System (ACSES), on portions of the NEC using 900 MHz spectrum; the FCC licensed that spectrum to the Association of American Railroads (AAR) in 2001,[3] and AAR has provided Amtrak access to that spectrum.

On April 14, 2014, Amtrak advised the Federal Railroad Administration (FRA) that all its NEC locomotives were equipped with onboard PTC equipment and 900 MHz radios.[4] Amtrak informed FRA of its plan to replace its 900 MHz PTC radios with 220 MHz PTC radios once its wayside infrastructure is completed, tested, and approved.[5] Amtrak also informed FRA that it had acquired adequate 220 MHz

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[1] Amtrak's counsel, Mr. Higgins, provided FCC staff copies of four STA requests by email on May 28, 2015.
[2] Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, § 104, 122 Stat. 4848, 4857 (2008).
[3] Petition of Association of American Railroads for Modification of Licenses for Use in Advanced Train Control Systems and Positive Train Control Systems, *Order*, 16 FCC Rcd 3078 (WTB PSPWD 2001) (issuing AAR a single nationwide geographic area license, defined by a 140-mile wide swath or ribbon that tracks all of the railroad rights-of-way in the United States).
[4] Amtrak PTC Annual Progress Report at page 2-1 (dated April 14, 2014).
[5] *Id.* at page 4-1.

spectrum to cover its New England Division (Boston to New Haven) and was negotiating to acquire spectrum to cover the remaining Amtrak Divisions.

On March 2, 2015, Amtrak amended certain applications—originally filed in December 2014—to obtain Automated Maritime Telecommunications System (AMTS) spectrum to deploy PTC.

On March 4, 2015, the Mobility Division granted Amtrak's request to obtain AMTS spectrum to deploy PTC.[6] As a result, Amtrak now holds 100 kHz of AMTS spectrum (217.000 to 217.100 MHz), which covers an 18-mile wide corridor that runs nine miles on each side of Amtrak's rail lines from New York City to Washington, D.C., from New York City to Albany, New York, and from Philadelphia to Harrisburg, Pennsylvania.

On May 22, 2015, and pursuant to Section 80.475(a)(1) of the Commission's rules,[7] Amtrak filed four license modification applications requesting permanent authority to operate 66 base stations on its AMTS spectrum. Because all 66 of Amtrak's PTC base stations are located less than 169 kilometers (105 miles) from one or more channel 13 TV stations, or less than 129 kilometers (80 miles) from one or more channel 10 TV stations,[8] Amtrak submitted an engineering study required by the rule to demonstrate how it will limit interference from its operations to viewers of those stations.[9] Pursuant to Section 80.215(h)(1) of the Commission's rules,[10] Amtrak also submitted a plan for mitigating interference to viewers of channel 10 and 13.[11]

On May 28, 2015, Amtrak filed its request for special temporary authority to operate the 66 base stations, pending Commission review and approval of Amtrak's request for permanent authority to operate the stations.

Legal Standard. The Commission may grant special temporary authority "[i]n emergency situations" and "[i]n other situations involving circumstances which are of such extraordinary nature that delay in the institution of temporary service would seriously prejudice the public interest."[12] Amtrak states that approval of its STA Request "will enable Amtrak to immediately commence testing and operation of its PTC network in the southern NEC."[13] The ultimate purpose of this network is to improve rail safety on the NEC. We find that the overriding public interest in advancing rail safety will be served by grant of Amtrak's request for special temporary authority.

Interference Reporting and Remediation Conditions. As noted above, there is a potential for Amtrak's testing of its 66 base stations to impact channel 10 and 13 broadcast operations and Amtrak has committed to promptly addressing any such instances of interference.[14] Accordingly, as a condition of

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[6] National Railroad Passenger Corporation (d/b/a Amtrak), *Order*, DA 15-287 (WTB MD rel. March 4, 2015).
[7] FCC File Nos. 0006812391, 0006812432, 0006812452, and 0006812459 (collectively, License Modification Applications).
[8] 47 C.F.R. § 80.475(a)(1).
[9] Pericle Communications Company, AMTS Channels 10 and 13 Television Interference Study, for Amtrak (May 21, 2015) (License Modification Applications, Exhibit 2).
[10] 47 C.F.R. § 80.215(h)(1).
[11] License Modification Applications, Exhibit 3.
[12] 47 C.F.R. § 1.931(b)(2)(i), (v).
[13] Request at 3.
[14] *Id.*

this grant of special temporary authority, we hereby require Amtrak to:

1. Provide 24-hour advance written notice by email, prior to testing a PTC base station, to all channel 13 TV stations within 169 kilometers (105 miles) and all channel 10 TV stations within 129 kilometers (80 miles) of that base station.

2. Maintain a 24-hour Trouble Desk to receive interference complaints as detailed in its STA Request.

3. Meet its commitment to address "[e]ach report of interference reported to the Trouble Desk" including opening a Trouble Ticket and a tracking number that the viewer or broadcaster may use as a reference.

4. Investigate any reported interference within 48 hours of receiving a report.

5. Resolve any interference caused by its testing at its own expense within 72 hours of receiving a report. Resolution may include, for example, Amtrak remotely adjusting PTC base station power levels, antennas, or installing a notch filter at a viewer's residence.

6. Submit weekly reports by email to FCC staff, stating:

    a. the number of interference reports received
    b. the time of reported interference
    c. the affected broadcast station
    d. a description of the base station that caused the interference, including its location, height, and other pertinent characteristics
    e. the period from receipt of a report to resolution, and the type of resolution

This special temporary authorization may be terminated at the Bureau's discretion, without a hearing, if conditions warrant.

Action taken pursuant to Sections 1, 4(i), 303(r), and 309(f) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 303(r), and 309(f), and sections 0.331 and 1.931(b) of the Commission's rules, 47 C.F.R. §§ 0.331 and 1.931(b).

Sincerely,

Roger S. Noel
Chief, Mobility Division
Wireless Telecommunications Bureau

Mr. CAPUANO. With that, I yield back. See, I did give you time.

Mr. DENHAM. If Mr. Sanford were here, he would take note.

Obviously, there is a lot of frustration in this committee, and certainly, a lot of tension to the lack of answers thereof. It has been 3 weeks now. This has been all over the media, rightly so. There has been loss of life. There are Americans that are still looking for answers in this as well. I know you will continue to do your research, but you have now come before the entire Committee on Transportation and Infrastructure of Congress to come here and not have cell phone information, whether the cell phone was on or off, operable, to not understand what those records are after 3 weeks, to not have an idea whether there was a mechanical failure when you have the train, a brand new Siemens train has been put in service less than a year ago, and we can't do the autopsy on the train and understand whether there was a mechanical failure.

It sounds like, while the engineer does not have recollection seconds before the crash, but he is at least being cooperative. We ought to have some assumptions, or some facts of whether or not there could have been operator error or an operator that actually created some type of malfunction. There are very few answers right now 3 weeks after one of the most horrific crashes that our Nation has ever seen.

So because of that, we are going to ask you for a timely response to the questions that have come here today. We need to make a determination whether or not this body will have another hearing several weeks from now.

So with that, I would 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 have been submitted to them in writing, and unanimous consent that the record remain open for 15 days for additional comments, and that witnesses provide answers to our questions for the record within 15 days of today's hearing.

Without objection, so ordered. I would like to thank each of our witnesses for being here today. Again, I would also like to thank our witnesses for your expedient response to the crash site itself and the collaboration that each of you showed in working together to resolve that.

And Mr. Hart, any response?

Mr. HART. Yes. Just one final comment. We have not found any anomalies with respect to the locomotive, just for clarification. We haven't found any anomalies with respect to the tracks, the signals, the brakes, or the locomotive that would explain this accident.

Mr. DENHAM. Thank you, Mr. Hart.

If no other Members have anything to add, the committee stands adjourned.

[Whereupon, at 1:12 p.m., the committee was adjourned.]



Testimony of the Honorable Christopher A. Hart
Chairman
National Transportation Safety Board
Before the
Committee on Transportation and Infrastructure
United States House of Representatives
on
Oversight of the Amtrak Accident in Philadelphia
Washington, DC
June 2, 2015

Good morning Chairman Shuster, Ranking Member DeFazio, and the Members of the Committee. Thank you for inviting the National Transportation Safety Board (NTSB) to testify before you today.

The NTSB is an independent Federal agency charged by Congress with investigating every civil aviation accident and significant incidents in the United States and significant accidents and incidents in other modes of transportation – railroad, highway, marine and pipeline. The NTSB determines the probable cause of accidents and other transportation events and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the Federal Government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.

Since its inception, the NTSB has investigated more than 140,500 aviation accidents and thousands of surface transportation accidents. In addition, the NTSB has completed 553 major investigative reports in the areas of railroad, pipeline, and hazardous materials safety, including 150 accidents involving Amtrak. On call 24 hours a day, 365 days a year, NTSB investigators travel throughout the country and internationally to investigate significant accidents and develop factual records and safety recommendations with one aim—to ensure that such accidents never happen again.

To date, we have issued over 14,000 safety recommendations to nearly 2,300 recipients. Because we have no authority to regulate the transportation industry, our effectiveness depends on our reputation for conducting thorough, accurate, and independent investigations and for producing timely, well-considered recommendations to enhance transportation safety.

The NTSB's annual Most Wanted List highlights safety-critical actions that the US Department of Transportation (DOT), United States Coast Guard, other Federal entities, states, and organizations need to take to help prevent accidents and save lives. In January, the NTSB released its Most Wanted List of Transportation Safety Improvements for 2015. Each year, we develop our Most Wanted List based on safety issues we identify as a result of our accident investigations. This year's Most Wanted List includes "Implement Positive Train Control in 2015." As we pointed out:

> Without Positive Train Control (PTC), real-world results have been tragic. PTC is a system of functional requirements for monitoring and controlling train movements to provide increased safety. While the NTSB has called for a system like this for over 45 years, it still has not been fully implemented in our commuter, intercity, and freight trains. Without it, everybody on a train is one human error away from an accident.
>
> Congress enacted the Rail Safety Improvement Act of 2008 [RSIA]. The Act requires each Class 1 rail carrier and each provider of regularly-scheduled intercity or commuter rail passenger service to implement a PTC system by December 31, 2015. Progress is being made toward this lifesaving goal. Metrolink became the first commuter rail system to implement PTC, when it began a revenue service demonstration on the BNSF Railway. This demonstration project is a step in the

right direction, and Metrolink reports it will implement PTC fully throughout its entire system before the Congressionally mandated deadline.

It has been more than 45 years since the NTSB first recommended the forerunner to PTC. In the meantime, more PTC-preventable collisions and derailments occur, more lives are lost, and more people sustain injuries that change their lives forever.

Yet there is still doubt when PTC systems will be implemented nationwide as required by law.

Each death, each injury, and each accident that PTC could have prevented, testifies to the vital importance of implementing PTC now.

Positive train control would have prevented the May 12 accident.

Amtrak Northeast Regional Train 188 Derailment: Background

On May 12, 2015, Amtrak Northeast Regional Train 188, operating northbound from Washington to New York, departed Philadelphia's 30th Street Station on time at 9:10 p.m. bound for New York's Penn Station. At 9:21 p.m. the entire train derailed while traveling through a four-degree left curve at Frankford Junction. Maximum speed through the curve is 50 miles-per-hour (mph), but NTSB's preliminary data analysis determined that moments before the derailment, the train was traveling at 106 mph when the engineer applied the emergency brake system. Three seconds later, when the data to the recorders terminated, the train's speed was approximately 102 mph. The train consisted of one electrically powered locomotive and seven passenger cars. There were 238 passengers and 5 crewmembers on board. Eight people were killed and more than 200 were injured.

Parties to the Investigation

As is the case with every event the NTSB investigates, the agency grants party status to those entities that can provide technical expertise. Parties and party participants may not withhold any information pertaining to either an accident or an incident from the NTSB. The NTSB designated the following organizations as parties to this investigation:

- Federal Railroad Administration (FRA)
- Amtrak
- Philadelphia Police Department
- Philadelphia Office of Emergency Services
- Philadelphia Fire Department
- Brotherhood of Locomotive Engineers and Trainmen (BLET)
- International Association of Sheet Metal, Air, Rail and Transportation Workers (SMART)
- Brotherhood of Maintenance of Way Employes Division of the Teamsters Rail Conference (BMWED)

Investigative Activities

The locomotive and passenger cars have been moved to Amtrak facilities in Wilmington and Bear, Delaware, for detailed examination and documentation. Investigators tested the air brakes on six of the passenger cars and found no anomalies or malfunctions. Passenger car #1 in the trainset was too badly damaged for brake testing at the Amtrak facility; therefore, components will be bench tested. Detailed inspection of the locomotive continues. Three-dimensional laser scanning of the locomotive, passenger cars, and an exemplar passenger car will be completed in the coming weeks.

The NTSB conducted an interview with the Amtrak engineer. The engineer reported that he recalled ringing the train bell as the train passed through the North Philadelphia Station Stop but he did not recall anything that transpired after that point in time, including the events surrounding the derailment. He stated he felt qualified and comfortable with the equipment, and he did not report fatigue or illness. Amtrak has provided the NTSB with the engineer's training and employment records. He had been operating trains in the Washington-Boston Northeast Corridor for about three years, and had been specifically assigned the Washington-New York segment of the corridor for several weeks.

The NTSB also has possession of the Amtrak engineer's cell phone. Under its enforcement authority, the FRA subpoenaed and obtained the engineer's cell phone records and has shared that data with NTSB forensic experts. Although the records appear to indicate that calls were made, text messages sent, and data used on the day of the accident, investigators have not yet made a determination if there was any phone activity during the time the train was being operated. In order to make that assessment, investigators have started the process of correlating the time stamps in the engineer's cell phone records with multiple data sources including the locomotive event recorder, the locomotive outward facing video, recorded radio communications, and surveillance video. The processes involved in correlating time stamps for all these devices are detailed and lengthy. Because of variations in time stamps for each data source, each one must be correlated to the same time zone so that a factual timeline of events can be developed that will allow investigators to understand if phone activity has any relevance to the accident.

The NTSB also interviewed two of the Amtrak conductors. One conductor aboard the accident train told investigators that she heard the Amtrak engineer talking over the radio with the engineer of the Southeastern Pennsylvania Transportation Authority (SEPTA) train that had stopped after being struck by an object that had shattered the windshield of the locomotive. The conductor reported hearing the SEPTA engineer, who was in the same area as the Amtrak train, say his train had been hit by a rock or some other projectile. The conductor then told investigators that she believed that she heard the Amtrak engineer say his train also had been struck by an object. The NTSB examined the dispatch tapes between dispatch and the trains, and indeed the SEPTA engineer did report to dispatch that his train had been struck by something. However, there was no recording from the Amtrak engineer reporting that his train had been struck by a projectile.

The windshield of the accident train was shattered and one area of glass had a breakage pattern that could be consistent with being hit by an object. The NTSB asked the Federal Bureau

of Investigation (FBI) to examine the fracture pattern of the accident train's windshield and determine if a bullet or other object had been fired at the accident train. FBI experts found no evidence of damage caused by a firearm. The NTSB is working to determine if another object or projectile hit the accident train's windshield, but we may never know if the windshield was shattered before or after the derailment.

Investigative specialists in crashworthiness and survival factors have interviewed passengers in order to understand the circumstances of the evacuation as well as how injuries correlated with train car and seating positions. Interviews with passengers and emergency responders will continue over the coming weeks. More interviews with the crew may be conducted, if necessary.

The accident train was equipped with an electronic alertness device (also known as an alerter or dead man's switch). The alerter is designed to monitor engineer activity and applies the train brakes should the device fail to detect activity for a predetermined period of time. The alerter receives inputs from various locomotive systems used to determine engineer activity, and, if required, provides visual and audible alarms, and a penalty brake initiation.[1] The alerter time out period is variable, based on locomotive speed and initial reset time cycle. When the alerter reset timing cycle has been exceeded without a reset action occurring, then its alarm cycle begins. The NTSB will determine if this system was operational and if it was activated.

While the NTSB investigators have completed their on-scene documentation work, additional investigation, analysis, and testing will continue over the coming months. The NTSB formed investigative groups in the following areas: operations, track, mechanical, signals, human performance, survival factors, medical, phone data, and recorders. These investigative groups will be examining the train's operation; the track; the train's mechanical condition, including the brake system; the train control signal systems; recorders; train car performance; survival factors; and emergency response. A preliminary examination of the signals systems has revealed no anomalies or malfunctions. An extensive review of phone data provided by the engineer's phone carrier is ongoing to determine if his cell phone was used while operating the train. The NTSB is also awaiting the results of the FRA mandated post-accident drug and alcohol testing of the accident train's crew. We are also performing toxicology testing, which is far more extensive than that required by the FRA. We will update you, as well as the general public, as the investigation moves forward.

Transportation Disaster Assistance

This accident triggered the Rail Passenger Disaster Family Assistance Act of 2008 (49 U.S.C. §§ 1139 and 24316). The law requires the NTSB to coordinate the response efforts of Amtrak (and future high speed passenger rail operators), local/state/federal agencies, and the American Red Cross to address the needs of the family members of those killed and those otherwise impacted by a major passenger rail accident. The NTSB's Transportation Disaster Assistance

[1] Penalty braking is a brake application that is initiated after the train engineer fails to comply with a signal or to acknowledge an alerter alarm.

(TDA) division takes on this responsibility, and they have been working closely with Amtrak over the past several years to develop a family assistance plan.

In the aftermath of this accident, there was close coordination between TDA, Amtrak, the American Red Cross, and Philadelphia emergency response agencies to ensure an effective response. While on-scene, the TDA staff was involved in several critical activities, including traveling to hospitals to provide information to those who were injured and facilitating several briefings for family members and survivors. The briefings provided information about the accident investigation before this information was briefed to the media, in addition to presentations by Amtrak and the American Red Cross. TDA also worked with Philadelphia agencies and Amtrak to ensure all victims of the accident were accounted for and provided guidance on the management of personal effects. Amtrak provided a Family Assistance Center for provision of services and information and assisted with any immediate needs of those affected by this accident.

TDA will continue to serve as a point of contact and provide investigative information to family members and passengers throughout the course of the NTSB investigation. They will also continue to interact with Amtrak to ensure the provisions of the statute are met.

Positive Train Control

Amtrak's PTC system in the Northeast Corridor is called the Advanced Civil Speed Enforcement System (ACSES). ACSES, a transponder-based system approved by FRA, enforces maximum track speed limits, permanent and temporary speed limits, and positive stop at interlocking and controlled point signals displaying stop. While ACSES is installed and operational in portions of the Northeast Corridor that are owned by Amtrak, the area of track where the derailment occurred is not yet equipped with ACSES.

This area is equipped with automatic train control (ATC), an older automatic braking system. ATC is designed to enforce restrictive and stop signals by applying a penalty brake application to slow or stop the train to prevent or mitigate the results of a train-to-train collisions. The system can be configured to permanently display a restrictive signal that would apply a penalty brake application if the train exceeds a preset speed limit. This particular ATC system configuration was in place on the *southbound* tracks where a greater speed reduction was required; there were no automatic systems in place to enforce the 50 MPH permanent speed restriction at the curve on the *northbound* tracks where the accident occurred. Amtrak has indicated it hopes to have ACSES operational in this area by the end of 2015, if possible.

This unfortunate accident is one of many accidents that would have been prevented by PTC. For over 40 years, the NTSB has investigated numerous train collisions and over-speed derailments caused by operational errors involving human performance failures. The NTSB attributed these human performance failures to a variety of factors, including fatigue, sleep disorders, medications, loss of situational awareness, reduced visibility, and distractions in the operating cab such as the use of cell phones. Many of these accidents occurred after train crews failed to comply with train control signals, follow operating procedures in non-signaled or "dark" territories, or adhere to other specific operating rules such as returning track switches to normal position after completing their work at railroad sidings.

PTC systems are designed to prevent derailments caused by over-speeding and train-to-train collisions by slowing or stopping trains that are not complying with the signal systems, track authorities and speed limits. They are also designed to protect track workers from being struck by trains by preventing train incursions into designated work zones. The first NTSB-investigated accident that train control technology would have prevented occurred in 1969, when four people died and 43 were injured in the collision of two Penn Central commuter trains in Darien, Connecticut.[2] The NTSB recommended, in response to that accident, that the FRA study the feasibility of requiring railroads to install an automatic train control system, the precursor to today's PTC systems.[3]

In 2008, the NTSB investigated a PTC-preventable accident when a Metrolink commuter train and a Union Pacific freight train collided head-on in Chatsworth, California, killing 25 people and injuring 102 others.[4] The NTSB concluded that the Metrolink engineer's use of a cell phone to send text messages distracted him from his duties. In the aftermath of the Chatsworth accident, Congress enacted RSIA to require implementation of a PTC system on each line over which intercity passenger or commuter service is operated or over which poison- or toxic-by-inhalation hazardous materials are transported.[5] We know that several rail carriers have stated that they will not meet the 2015 deadline. This is disappointing.

Meanwhile, we continue to see accidents that could be prevented by PTC:

- In September 2010, near Two Harbors, Minnesota, human error and fatigue contributed to the collision of two freight trains, injuring five crewmembers.
- In April 2011, near Red Oak, Iowa, fatigue contributed to the rear-end collision of a coal train with a standing maintenance-of-way equipment train, killing two crewmembers.
- In May 2011, in Mineral Springs, North Carolina, human error contributed to the rear-end collision of two freight trains, killing two crewmembers and injuring two more.
- In May 2011, in Hoboken, New Jersey, human error contributed to the collision of a train with the bumping post at the end of the track.
- In January 2012, near Westville, Indiana, inattentiveness contributed to the collision of three trains, injuring two crewmembers.
- In June 2012, near Goodwell, Oklahoma, human inattentiveness contributed to the collision of two freight trains, killing three crewmembers.
- In July 2012, near Barton County, Missouri, human error contributed to the collision of two freight trains, injuring two crewmembers.
- In May 2013, near Chaffee, Missouri, inattentiveness and fatigue contributed to the collision of two freight trains, injuring two crewmembers and causing the collapse of a highway bridge.

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[2] NTSB, *Penn Central Company, Collision of Trains N-48 and N-49 on August 20, 1969*, Rpt. No. RAR-70-03 (October 14, 1970).
[3] R-70-020.
[4] NTSB, *Collision of Metrolink Train 111 With Union Pacific Train LOF65-12 Chatsworth, California September 12, 2008*, Rpt. No. NTSB/RAR-10/01 (Jan. 21, 2010).
[5] Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, § 104 (2008).

- In December 2013, near Keithville, Louisiana, human error contributed to the collision of two freight trains, injuring four crewmembers.
- In December 2013, in the Bronx, New York, four people lost their lives and 61 others were injured when a Metro-North commuter train derailed after entering a curve with a 30 mph speed limit at 82 mph.

Since 2004, in the 30 PTC-preventable freight and passenger rail accidents that the NTSB investigated, 69 people died, more than 1,200 were injured, and damages totaled millions of dollars. The NTSB files are filled with accidents that could have been prevented by PTC, and for each and every day that PTC implementation is delayed, the risk of an accident remains.

There is much debate by policymakers on extending the 2015 deadline established by the RSIA. Some railroads may meet this deadline. For those railroads that have made the difficult decisions and invested millions of dollars, they have demonstrated leadership. For those railroads that will not meet the deadline, there should be a transparent accounting for actions taken – and not taken – to meet the deadline so that regulators and policymakers can make informed decisions.[6]

Audio and Image Recorders Inside Locomotive Cabs

The accident train was equipped with recorders: forward-facing image recorders and an event data recorder. The recorders have been sent to NTSB's lab for analysis. However, the accident train was not equipped with audio and image recorders inside the locomotive cab. Audio and image recorders in locomotives and cab car operating compartments are critically important because they could assist NTSB investigators and others with understanding what happened in a train before an accident. Indeed, inward facing recorders could have provided valuable information as NTSB determines the probable cause of this accident. Significantly, these recordings could also help railroad management *prevent* accidents by identifying safety issues before they lead to injuries and loss of life by developing valuable training and coaching tools.

The NTSB recognizes the significant privacy concerns regarding the public disclosure of audio and image recorders. Congress also has been sensitive to the premature public disclosure of these sensitive data and information after transportation accidents. For this reason, in 1990, it enacted confidentiality protections against the premature disclosure of aviation cockpit voice or video recordings or transcripts of oral communications by flight crewmembers,[7] and in 2000, it enacted similar confidentiality protections against the premature disclosure of surface vehicle voice or video recordings or transcripts of oral communications of train employees or other surface transportation operating employees.[8] Congress also precluded litigants from using discovery to obtain cockpit and surface vehicle recordings and transcripts in any judicial proceeding.[9]

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[6] R-13-23 and R-13-27.
[7] Independent Safety Board Act Amendments of 1990, Pub. L. 101-641, § 3(b), codified at 49 U.S.C. § 1114(c).
[8] National Transportation Safety Board Amendments Act of 2000, Pub. L. 106-424, § 5, codified at 49 U.S. C. § 1114(d).
[9] 49 U.S. C. § 1154.

Since the 1990s, the NTSB has recommended that the FRA require audio recorders inside locomotive cabs. In its investigation of the February 16, 1996, collision between a Maryland Rail Commuter train and an Amtrak train near Silver Spring, Maryland, in which no operating crewmembers survived, the NTSB was unable to determine whether crewmember activities leading up to the accident contributed to the accident. [10] In the NTSB's investigation of the Bryan, Ohio, railroad accident in 1999, with no surviving crewmembers, this safety recommendation was reiterated.[11] However, the FRA stated that no action would be taken to implement the recommendation. Since the FRA's refusal to act on the recommendation of in-cab audio recorders, the NTSB has investigated additional accidents in which audio recorders would have provided information to help determine probable cause and improve safety, and after a 2005 collision in Anding, Mississippi, the NTSB added inward facing video recorders to this recommendation.[12]

The Chatsworth tragedy again made the case crystal-clear for understanding the activities of crewmembers in the minutes and seconds leading up to accidents. Discussing the strong safety case for a requirement for inward-facing cameras in locomotives, the NTSB noted that:

> [i]n all too many accidents, the individuals directly involved are either limited in their recollection of events or, as in the case of the Chatsworth accident, are not available to be interviewed because of fatal injuries. In a number of accidents the NTSB has investigated, a better knowledge of crewmembers' actions before an accident would have helped reveal the key causal factors and would perhaps have facilitated the development of more effective safety recommendations.[13]

Accordingly, the NTSB enhanced its recommendation that the FRA require the installation, in control compartments, of "crash- and fire-protected inward- and outward-facing audio and image recorders capable of providing recordings [for at least 12 hours] to verify that train crew actions are in accordance with rules and procedures that are essential to safety as well as train operating conditions."[14] The NTSB also recommended that the FRA "[r]equire that railroads regularly review and use in-cab audio and image recordings . . . to verify that train crew actions are in accordance with rules and procedures that are essential to safety."[15]

The NTSB reiterated these important recommendations in its report on the collision of a BNSF coal train with the rear end of a standing BNSF maintenance-of- way equipment train near Red Oak, Iowa, which resulted in fatal injuries to the two crewmembers of the striking train.[16] Damage was in excess of $8.7 million. As the NTSB stated in its report, the accident again

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[10] NTSB, *Collision and Derailment of Maryland Rail Commuter Marc Train 286 and National Railroad Passenger Corporation Amtrak Train 29 Near Silver Spring, Maryland On February 16,1996,* Rpt. No. NTSB/RAR-97/02 (July 3, 1997), R-97-9.

[11] NTSB, *Collision Involving Three Consolidated Rail Corporation Freight Trains Operating in Fog on a Double Main Track Near Bryan, Ohio on January 17, 1999,* Rpt. No. NTSB/RAR-01/01 (May 9, 2001).

[12] R-07-3

[13] NTSB, *Collision of Metrolink Train 111 With Union Pacific Train LOF65-12 Chatsworth, California September 12, 2008,* Rpt. No. NTSB/RAR-10/01 (Jan. 21, 2010), at 58.

[14] R-10-1.

[15] R-10-2.

[16] NTSB, *Collision of BNSF Coal Train With the Rear End of Standing BNSF Maintenance-of-Way Equipment Train Red Oak, Iowa on April 17, 2011),* Rpt. No. NTSB/RAR-12/02 (April 24, 2012).

demonstrated the need for in-cab audio and image recording devices to better understand (and thereby prevent) serious railroad crashes that claim the lives of crewmembers, passengers, and the public.

Subsequent to the Red Oak, Iowa, accident, the NTSB investigated the June 2012 collision of two Union Pacific freight trains near Goodwell, Oklahoma, that resulted in three crewmember fatalities and $14.8 million in estimated damage.[17] In the NTSB Accident Report, we noted that the FRA had failed to take action on the NTSB's two recommendations from the 2010 Chatsworth accident for in-cab audio and image recording devices and again reiterated these two recommendations.

We have been encouraged by the inclusion of these recommendations in rail safety legislation, and we hope this can be part of a rail safety legislative proposal that may be considered by this Congress. We are also encouraged that two Class I railroads and some commuter railroads have proceeded with installing in-cab audio and image recorder devices in their locomotives. We will continue to address the recommendation on an individual railroad basis and with the FRA.

Thank you for the opportunity to testify before you today. I look forward to responding to your questions.

[17] NTSB, *Head-On Collision of Two Union Pacific Railroad Freight Trains Near Goodwell, Oklahoma, June 24, 2012,* Rpt. No. NTSB/RAR-13/02 (June 18, 2013).

QUESTIONS FOR THE RECORD
THE HONORABLE ANDRE CARSON
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
HEARING ON
"OVERSIGHT OF THE AMTRAK ACCIDENT IN PHILADELPHIA"
JUNE 2, 2015

The Honorable Christopher Hart, Chairman, National Transportation Safety Board

Improving Regional Coordination – Chairman Barletta and I just concluded a very informative roundtable in Philadelphia last week for our Emergency Management Subcommittee. We talked with state and local officials about mitigating disaster costs and regional disaster preparation with state and local officials. Philadelphia's Fire Chief pointed out that before the Amtrak accident, the area had recently held a mass casualty drill. But I was stunned when he told us that Amtrak wasn't included. As a former first responder, I know how important it is to have strong plans in place before emergencies – natural and man-made.

- I'd like to hear from each witness what you've learned from this tragedy that could prevent this happening again? Could the emergency response have been improved?

ANSWER: The objective of the investigation by the National Transportation Safety Board (NTSB) is to determine what could prevent this from happening again. The NTSB will reveal what it has found when the investigation is complete, or sooner if we see a need for immediate recommendations before completing the investigation. Our investigation will include a review of the emergency response. As you well know, a good emergency response is crucial to saving lives. Because the City of Philadelphia's Office of Emergency Services and Fire Department are parties to our investigation, they will learn details related to the investigation and response as we are learning them. As a result, they can make changes immediately rather than waiting for any NTSB recommendations.

QUESTIONS FOR THE RECORD
THE HONORABLE PETER DEFAZIO
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
HEARING ON
"OVERSIGHT OF THE AMTRAK ACCIDENT IN PHILADELPHIA"
JUNE 2, 2015

The Honorable Christopher Hart, Chairman, National Transportation Safety Board

- According to the FRA, human error is the number one cause of all train accidents. In fact, Mr. Boardman stated in his testimony, "We have redundant systems designed and built into everything and they protect every movement but at the end of the day people make mistakes." Why is PTC important, and how would it have prevented this accident?

  ANSWER: We do not yet know the cause of this accident, but we do know PTC is a safeguard against human factors such as distraction, fatigue or simple human error. PTC provides an additional layer of safety should something go wrong. It also helps prevent or mitigate accidents involving overspeeding, train-to-train collisions, incursions in to roadway workzones, and misaligned switches.

- The NTSB found in its investigation of the Metro North accident that occurred in the Bronx on December 1, 2013, that the window panes detached from the rail cars, and that "given the extent of dirt and plant material in the wounds and the nature of their injuries, all four were completely or partially ejected from the train through window openings. Two others sustained severe injuries consistent with contacting the ground outside the train as the cars slid along the ballast." Did the NTSB see something similar in the Amtrak derailment? Is the detachment of windows something the NTSB is looking into as a result of these accidents?

  ANSWER: Windows did detach in the accident in Philadelphia. We are trying to determine the reason behind that and whether it contributed to fatalities or injuries, as it did in the December 1, 2013 Metro North accident. The recommendation we made to the FRA as a result of the Metro North investigation is below.

  > Develop a performance standard to ensure that windows (e.g., glazing, gaskets, and any retention hardware) are retained in the window opening structure during an accident and incorporate the standard into 49 Code of Federal Regulations(CFR) 238.221 and 49CFR 238.421 to require that passenger railcars meet this standard. (R-14-74)

  This recommendation was made to FRA so that safer windows would be used throughout the entire industry, not only at Metro North.

  Crashworthiness of rail cars, in general, is an area we are examining because the survival space in the first passenger car was severely compromised. If, at any time during the investigation, we see the need for safety recommendations about the cars and/or windows, we will make those recommendations.

- Since the Metrolink accident in Chatsworth, California, in 2008, the NTSB has recommended that railroads install crash- and fire-protected inward-facing cameras that provide a minimum of 12 continuous hours of audio and imaging in all locomotive cabs. How will inward-facing cameras help with accident investigation and prevention?

  ANSWER: The NTSB has been on record since 1997 for some type of audio recorders and since 2007 for a video and audio recorder because we know this information is vital to answer questions in an accident investigation, especially in an investigation in which the crew do not remember what happened or, worse, are fatally injured.

  We have also recommended that the data from recorders be used to enable efficiency testing and systemwide performance monitoring programs. This is a proactive approach to improve crew performance in general and to prevent human factor accidents in particular.

  When lives are on the line in passenger service, and in the case of hazmat or other delicate material being transported in freight service, video and audio recorders should be required. The NTSB recognizes the importance of appropriate protections to ensure this data is not released to those outside of an investigation, whether the investigation is led by us or the Federal Railroad Administration (FRA).

- Mr. Pierce mentioned that the technology on inward-facing cameras that the freight railroads have adopted has not been measured to crash-worthiness standards and that the technology failed in several collisions so the data was not available. Has NTSB looked into this?

  ANSWER: The current recommendations on this topic to the FRA are:

  > Require the installation, in all controlling locomotive cabs and cab car operating compartments, of crash- and fire-protected inward- and outward-facing audio and image recorders capable of providing recordings to verify that train crew actions are in accordance with rules and procedures that are essential to safety as well as train operating conditions. The devices should have a minimum 12-hour continuous recording capability with recordings that are easily accessible for review, with appropriate limitations on public release, for the investigation of accidents or for use by management in carrying out efficiency testing and systemwide performance monitoring programs. (R-10-001 classified "Open—Unacceptable Response")
  >
  > Require that railroads regularly review and use in-cab audio and image recordings (with appropriate limitations on public release), in conjunction with other performance data, to verify that train crew actions are in accordance with rules and procedures that are essential to safety. (R-10-002 classified "Open—Unacceptable Response"

  Only a few railroads have installed inward-facing cameras at this time. However, we have investigated accidents in which the outward facing camera and event recorder data were destroyed. The most recent one was in Goodwell, Oklahoma where two trains collided and fire destroyed the outward facing camera and the event recorder. Following that accident we made the following recommendation to the FRA:

> Require all information captured by any required recorder to also be recorded in another location remote from the lead locomotive(s) to minimize the likelihood of the information's being unrecoverable as a result of an accident. (R-13-022)

We also made the following recommendation to all Class I railroads as a result of the Goodwell investigation:

> Install in all controlling locomotive cabs and cab car operating compartments crash- and fire-protected inward- and outward-facing audio and image recorders. The devices should have a minimum 12-hour continuous recording capability. (R-13-026)

We have also asked the American Association of Railroads to develop crash standards for video and audio recorders (R-12-24).

Our original recommendation on this topic was to the FRA in an effort to obtain national standards to ensure a certain level of crashworthiness. Without that national standard, the risk is that the carriers will install whatever works best for them without necessarily thinking about crashworthiness standards.

- Mr. Pierce mentioned that train crews can be "temporarily confused as to their location." Has "situational awareness" played a role in train accidents? What contributes to the problem, and what can be done to prevent it?

ANSWER: Situational awareness refers to a cognitive state in which a person temporarily losses a functional appreciation for: (1) the broad goals of their work activity, (2) the spectrum of work demands (i.e., tactical actions, communications, hazard avoidance) of their immediate task, or (3) the anticipation of upcoming task requirements. Several causes have been identified as leading to a loss of situational awareness, including: (1) cognitive distraction, (2) task loading (over- or under-workload), and (3) health factors, including fatigue and intoxication. Crew resource management training and proper job design have mitigated this problem in many transportation contexts, including rail.

The NTSB has identified loss of situational awareness in several accidents, like (1) The derailment of Northeast Illinois Regional Commuter Railroad Train 519 in Chicago, Illinois, October 12, 2003, (2) a CSX fatality in 2009, and (3) an Amtrak and MARC train collision in 2002. Situational awareness was also discussed in the accident in Two Harbors, Minnesota. No findings about degraded situational awareness were delineated in that report but we issued recommendations to the FRA and the Canadian National Railroad pertaining to crew resource management.

- Mr. Pierce mentioned that the "level of vigilance required of a locomotive engineer has reached the point of task overload in many parts of the industry." Is NTSB aware of this? If so, what recommendations has the NTSB issued to address this?

ANSWER: We have not identified an increase in workload, specifically task overload, for the engineers, or an increase in work demands/factors/task that would affect their ability to

maintain vigilance. The NTSB has long noted the importance of train and engine crew members maintaining the safe operation of trains, as well as the shortcomings in safety expectations based solely on rule-compliance. The NTSB has recommended numerous technology-based approaches to mitigate these human performance limitations, most notably Positive Train Control, or PTC. The NTSB continues to be concerned with variables that could affect train crew performance, including fatigue, cell phone use, and medical fitness for duty. All these factors can affect their ability to be vigilant, regardless of their existing workload.

TESTIMONY OF

JOSEPH BOARDMAN

PRESIDENT AND CHIEF EXECUTIVE OFFICER

AMTRAK

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WASHINGTON, DC 20002

BEFORE THE COMMITTEE ON

TRANSPORTATION AND INFRASTRUCTURE

HEARING ON

"OVERSIGHT OF THE AMTRAK ACCIDENT IN PHILADELPHIA"

TUESDAY, JUNE 2, 2015

10:00 A.M.

2167 RAYBURN HOUSE OFFICE BUILDING

Mr. Chairman, Ranking Member, and Members of the Committee, good morning, and thank you for the invitation to testify before you today.

I wish I that different circumstances had brought us here today, but since they did not, I must start by offering my heartfelt regret for the recent derailment at Frankford Junction. It was Amtrak's train on our railroad, and we are responsible for the incident and its consequences. I regret it deeply, and if the conversations I have had over the last week are anything to go by, I think that sentiment is shared by everyone in our company. Everything we have done since has been driven by the sincere hope that we could do something, however small, to mitigate the suffering and loss that everyone has endured as a result of this terrible accident. We have been greatly helped in that effort by the people of Philadelphia, and I would like to thank all of them, but particularly Mayor Nutter, the police, the fire and EMS services, and the staffs of the hospitals who received and treated the injured. Thank you for everything you did on behalf of our passengers and employees.

I should also take this opportunity to note that we want to do everything we can to support the NTSB's investigation. I am confident that the Safety Board will investigate this matter thoroughly. I will refrain from addressing matters that are still under investigation. We will be working closely with both the NTSB and our regulators at the FRA to ensure that we address the root causes of this accident. We will do this because Amtrak is a passenger railroad, and we understand that safety must continue to be our highest priority. I know what a

tremendous trust the public places in us, and we will do everything we can to prove that we're worthy of that trust.

At Amtrak, we are committed to safety and we operate a safe railroad. The Northeast Corridor in particular has an excellent safety record, and this accident is so shocking because it's so unexpected. People have come to accept that the NEC will deliver them safely to their destination, because we have such a good record of doing so. Our last fatal accident on the NEC occurred 28 years ago, and since that time, Amtrak trains operated by Amtrak-trained crews have carried millions of people in safety. We have redundant systems designed and built into everything, and they protect every movement – but at the end of the day, it is people who operate these trains, and people make mistakes. For 28 years, we have operated safely, without an accident-related passenger fatality, and we are now incorporating the lessons of this tragic failure.

The NEC's safety systems are the best in the country. In no other place is a comparable volume of traffic moved with such a solid record. In addition to a thorough training, oversight and coaching system for our crews, we have a layered signal system that provides trains with multiple levels of protection.

There is a trackside signal system to warn crews of the presence of trains, so that the danger of collision is minimized. There is an alerter system to ensure that engineers are awake and attentive, and to stop the train if they are not. There is a cab signal system to ensure they

receive the appropriate signal warnings, regardless of the time of day or the weather. There is an automatic train control system (ATC), to ensure compliance with (and acknowledgement of) the signals, and to stop the train if the crews fail to acknowledge or comply. Finally, in places, there is a system called the Advanced Civil Speed Enforcement System (ACSES), Amtrak's Positive Train Control (PTC) system to ensure that engineers maintain the appropriate speed limits, and to stop the train if they fail to comply with the speed limits. That is in service from New Haven to Boston and at points between Washington and New York where trains exceed 125mph, and it has been installed on the rest of the Amtrak owned and operated NEC and should be operational in time to comply with the Federal statutory mandate of Dec 31, 2015. No other Class I railroad in the United States is as far along in installing PTC as Amtrak is.

These systems exist to backstop the engineers and train crews who are ultimately responsible for safe movement of our trains. Our engineers and conductors are required to pass an extensive training program, reviewed and approved by the FRA, which is designed to equip crews with the necessary skills, experience, knowledge, and outlook to operate a train successfully. Crews are expected to develop a very high level of familiarity with the route, and to know where they are at all times and under all conditions – including bad weather and the hours of darkness. Probably millions of train movements – not just Amtrak, but SEPTA services – have negotiated the curve at Frankford Junction safely since Amtrak took over the NEC in 1976. Our system is predicated on a program that develops competent operating personnel through a lengthy process that combines on-the-job practice with classroom instruction, and backs the people up with a solid system of multi-layered safeguards.

It works because, generally speaking, we have put together a safety system that weaves a tight net – or even a series of layered nets – with each layer guarding against the possibility of a failure that the previous layers don't catch. Nothing is impossible, but we try to guard against the full range of contingencies. We rely on these layered and redundant systems, but there's one thing that we have never been able to completely overcome, and that is the risk of human error. There is always a risk of a gap in even the most tightly woven net.

The Train 188 derailment revealed one such hole in our safety net, and in the weeks since the derailment, many people have raised a seemingly simple question: why didn't the track where the accident occurred have some kind of safety feature installed, to trip the signals and force the engineer to slow the train?

This is the right question to ask, and I am going to address it directly today while first providing you the necessary background information to understand the answer.

In 1990, an Amtrak train derailed on a sharp curve at Back Bay Station in Boston, and collided with an oncoming MBTA train. That derailment was caused by an engineer failing to slow a train before a curve. Shortly thereafter, industry regulators and operators reviewed the NEC and looked for other places where the approach speed of a train was greater than speed at which the train might derail in the curve—in other words, where a train could derail if an engineer failed to slow it down. At those points we used a modification to the ATC system to

install a "code change point" to force engineers to slow down in advance of the curve. The southbound tracks at Frankford Junction were one such place. The derailment speed at Frankford Junction is 98mph. Northbound trains approach that curve at 80 mph, while southbound trains approach at 110mph. So in short, when a train approaches from one direction but doesn't slow down, there is no risk of derailment; but if when a train comes from the other direction and doesn't slow down—for whatever reason—there *is* a risk of derailment. Thus, we applied the modification to the southbound tracks so that the trains approaching from the north at speeds of 110mph would receive a signal indication in the cab just before the curve, forcing them to slow to 45 mph so that they could pass through the curve safely at 50mph. The northbound track did not have the same protection installed, because the approach speed was 80mph, which was slow enough that a train could round the curve at that speed without derailing if the engineer failed to slow down. At that time, the notion that an engineer might actually *accelerate* into the northbound curve was not a circumstance we anticipated, and thus we didn't mitigate for it.

It was a reasonable decision reached by reasonable experts under reasonable circumstances. And since this and similar code change points were installed in 1991, the application of this policy successfully prevented overspeed derailments throughout the NEC for about twenty-five years. That clearly changed on May 12. The proper response now is for us to figure out what happened, and to narrow or eliminate the gap so that this accident cannot happen again. We know that the full implementation of ACSES later this year will be a major step forward in this regard. Until it is fully in service, we are taking several steps to ensure the safety of our trains and passengers.

Immediately after the Train 188 accident, we installed a code change point on the south side of Frankford Junction, to ensure that trains cannot enter the curve at speeds above 45 mph, just as they do from the other direction. We are now looking across the NEC for other spots where a similar vulnerability might exist, and we will take the same action at those points, pending the introduction of ACSES, to ensure that we close any windows of vulnerability that may exist. Most importantly, we are doing everything we can do to hasten the installation of ACSES across the NEC. As I noted, it is today in operation on the entire North End of the NEC between New Haven and Boston, but installation on the South End is not yet complete. The law requires us to complete our installation prior to December 31, 2015, and we will push the work to ensure that the system is fully – and safely – operational as soon as possible. In the meantime, we are reviewing our system to look at curves to ensure that we are doing everything we can to be sure we're making adequate provisions for the safety of the public. We are talking to our train crews, to ensure that everyone is fully focused on safe operations. Managers are out keeping an eye on operations. People at every level are looking out to ensure that our operations are safe and reliable in the coming weeks and months. We will also be installing inward-facing video cameras in our locomotive fleet, to allow for more effective oversight and monitoring of crew performance and provide a better record of engineer actions and communications.

The most important thing we can do to improve safety is to complete the work of installing PTC on the NEC. We were the first railroad to implement PTC in America, and we're still far ahead of the rest of the industry. My belief in the importance of PTC predates my arrival

at Amtrak. As the Federal Railroad Administrator, I worked hard to secure the passage of the law requiring PTC installation on the railroads. I still believe that the single greatest contribution that my generation of railroaders can make to the industry is to implement PTC as rapidly as possible. We at Amtrak are working to do that, and we're fortunate to have some of the nation's leading experts on PTC leading the process. I have confidence in them, and in our company – and I promise you that by the end of the year, this system, which will dramatically enhance safety, will be complete and in operation on the NEC.

Amtrak's Responses to QFRs from Hearing on June 2, 2015

Question 1: (Rep. Rokita)
Please provide, as requested by Rep. Rokita, how much of the American Recovery and Reinvestment Act funding received by Amtrak was used for positive train control (PTC) projects?

Answer to Question 1:
Amtrak's ARRA-funded investment in PTC is summarized in the attached table. The investment is divided into three categories – investment in the Michigan Line and NEC infrastructure, and investment in equipment (which includes a range of modifications, and is not narrowly associated with one locomotive, service, or PTC type). These changes are summarized in the table below:

SAP_WBS	Final_Title	2009.FY	2010.fy	2011.FY	Grand Total
C.EN.100913	WAS-NRO ACSES INSTALLATION	295,680	10,500,911	12,540,218	23,336,809
C.EN.100927	MICH LINE ITCS INSTALLATION	3,153	19,689,129	4,218,445	23,910,727
C.EN.100930	POS TRAIN CTRL EQI DEVELOPMENT		2,755,904	1,721,929	4,477,833
Grand Total		**298,833**	**32,945,944**	**18,480,591**	**51,725,369**

Question 2: (Rep. Brown)
Please provide a list of the most critical safety-related projects on the NEC for the hearing record.

Answer to Question 2:
Amtrak has identified a list of safety-critical infrastructure programs that need to be included in our FY 2016 budget. These programs (which include both capital and maintenance work) include:

- **Capital Infrastructure Programs**
  - East River Tunnels, NY (Track rehabilitation)
  - B&P Tunnels, MD (1,500 block ties)
  - Full Ballast Replacement (30 track miles in MD)
  - Interlocking (Interlockings and Components Replacement along the NEC)
  - Moveable Bridges – (Advance design of Pelham Bay, NY & Conn River, CT; component replacement at Dock Bridge, NJ)
  - Bridge Ties Replacement (along the NEC)
  - Undergrade Bridge (1 bridge replacement and component upgrades to 10 bridges along the NEC)
  - Culverts (Replace 2 culverts in the NEC)
  - Right-of-Way Fence (Install 14,000 feet along the NEC)
  - Tunnel Structures (Upgrades to bench walls, sump pumps)
  - Fall Hazard Protection (Replace walkways and ladders at signal bridges in the NEC)
  - Stations Upgrades (4 elevators at 30th St. Station, PA; 2 escalators at NY Penn Station, NY; 30th St. Station Façade Upgrade, PA)
  - Positive Train Control (Complete implementation of ACSES from Washington to Boston by December 2015; Upgrade existing ACSES wayside technology from New Haven to Boston)

- Centralized Electrification and Traffic Control (Complete functional requirements, SCADA controls and rehab 30th St. Station back-up facility)
- Hot Box Detectors (Complete installation in Mid-Atlantic Division)
- Automatic Block Signals (Installation of various components in Mid-Atlantic Division)
- Fire & Life Safety SCADA system (Advance construction of system upgrade)
- Arc Flash Study (Improvements to hazard protection)

- **Maintenance Programs**
  - Bush Spraying (along the NEC)
  - Tree Cutting (along the NEC)
  - Rail Testing (system wide)
  - Concrete Tie Inspection (system wide)
  - Foreman Mentoring Program (Safety improvements)
  - Bridge Inspections (system wide)
  - Signal Tests & Inspections (system wide)

Amtrak has identified a list of safety-critical equipment programs that need to be included in our FY 2016 budget. These programs (which include both capital and maintenance work) include:

Amtrak's Mechanical Department

- Completion of PTC installation on equipment
- Installation of inward facing cameras on locomotives
- Trackside Acoustic Detection System
- Clean, Oil, Test and Stencil (COT&S)
- Truck overhauls on cars and locomotives
- Low level exit path markings
- Emergency back-up generator at Wilmington shops
- Fall protection
- Upgrade electrical sub-stations at Beech Grove

Question 3 (Rep. Nadler):
The tunnels in NY have been described as ticking time bombs because of the damage from salt water during Hurricane Sandy. What's the status of those tunnels? What would happen if they were to go out of service? And how much funding is necessary to prevent that from happening?

Answer to Question 3:
A: The tunnel under the Hudson River sustained some long term damage that was caused by chlorides deposited by the storm surge. At some point in the next twenty years, both tubes will have to be taken out of service for rebuilding, and this will have a serious impact on traffic between New York and New Jersey. We estimate that at the height of rush hour, approximately seventeen percent of the total trans-Hudson commuter traffic passes through this century-old tunnel. If we have to take one of the tubes out of service without a replacement, there will be a considerable impact to the flow of traffic into Manhattan, and the rest of the transportation infrastructure, such as the PATH tunnels, the Lincoln and Holland Tunnels, and the George Washington Bridge, which are already severely congested, will have to accommodate the overflow of traffic.

Question 4 (Rep. Nadler):
If they do go out of service, what impact would that have on the economy? Please quantify that.

Answer to Question 4:

We don't have a dollar value associated with the impact, but we have worked with a consultant to try to quantify the impact associated with the complete shutdown of rail traffic through the Hudson River tunnel, and it generated an impact on the transportation system that worked out as something like three quarters of a million person-hours of delay.

WRITTEN STATEMENT OF
SARAH FEINBERG,
ACTING ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION,
U.S. DEPARTMENT OF TRANSPORTATION

BEFORE THE
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
U.S. HOUSE OF REPRESENTATIVES

"OVERSIGHT OF THE AMTRAK ACCIDENT IN PHILADELPHIA"

June 2, 2015

Chairman Shuster, Ranking Member DeFazio, and Members of the Committee, thank you for the opportunity to appear before you today to discuss issues related to the tragic derailment of Amtrak Train 188 on May 12, 2015, in Philadelphia, Pennsylvania. We extend our deepest sympathies to the victims of this accident, and to their loved ones. And I can assure them that we will take every step we can to ensure an accident like this cannot happen again.

The Federal Railroad Administration (FRA) understands the need to take action quickly to address the cause or causes of this incident. While it will take time to complete the investigation, we did not and will not wait to take immediate actions that will improve the safety of Amtrak operations on the Northeast Corridor (NEC), as well as other passenger rail operations. On May 16, FRA outlined steps necessary for Amtrak to take before allowing its operations to resume north of Philadelphia, and we followed that with an Emergency Order on May 21. These were our initial actions and we are doing more.

The FRA team has been working closely with our partners at the National Transportation Safety Board (NTSB) to investigate the cause of the May 12th derailment. Today, I will provide the Committee information that we have confirmed. Then, I will focus on FRA's process to complete its investigation, and describe the actions we have taken in direct response to this tragedy. Next, I will address several broader safety issues highlighted by the derailment, including implementation of Positive Train Control (PTC) technology and key human factor issues.

As you know, the railroad industry has made remarkable safety improvements over the last decade. However, the devastating effects from an accident like the May 12th derailment make clear that we still have hard work ahead to make rail transportation as safe as possible, particularly when technology exists that can prevent some of the most tragic accidents. With that in mind, I want to assure you that FRA is firmly committed to taking additional actions that will mitigate and or eliminate the risks and hazards identified in the ongoing investigation.

Amtrak Train 188 Derailment in Philadelphia

On Tuesday, May 12, 2015, Amtrak Northeast Regional Train 188 (Train 188) departed Washington, D.C.'s Union Station at 7:15 p.m., traveling northbound on the Northeast Corridor (NEC) on the way to Penn Station in New York City. Train 188 made five stops before the accident, the last being at Philadelphia's 30th Street Station, where it arrived at 9:06 p.m. and departed at 9:10 p.m., from track No. 4. At approximately 9:21 p.m. and 9 miles from the 30th Street Station, the train derailed near milepost 81.63 while traveling through a curve at Frankford Junction.

According to Amtrak, at the time of the derailment there were five Amtrak crewmembers, three Amtrak commuting employees and 250 passengers aboard, occupying approximately 50 percent of the train's capacity. Train 188's consist was conventional for Amtrak Northeast Regional Service - consisting of an ACS-64 locomotive, six Amfleet1 passenger coaches and one café car. As a result of the accident, eight passengers were killed, many were seriously injured, and many more had lesser injuries. Some passengers remain in the hospital today.

I learned of the derailment within approximately 30 minutes of its occurrence and immediately dispatched investigative personnel to the scene. The initial FRA team included a Regional Administrator, a Deputy Regional Administrator and five rail safety inspectors from the following disciplines: signal and train control; track, motive power and equipment; and operating practices. A safety specialist from our Passenger Rail Division was also on-scene that night and my Chief Safety Officer joined them the next morning.

After dispatching the investigative team, I travelled to the scene that same evening and witnessed the heroic actions of the first responders as they rescued passengers and provided medical treatment. The Philadelphia Police and Fire Departments, other first responders, and the citizens who provided water and assistance were all instrumental in alleviating the immediate needs after this tragic accident. I commend them for their immediate and impressive response.

After the initial emergency response efforts, FRA began its investigation – working in close coordination with the NTSB and Amtrak - to collect, secure, and preserve critical forensic information, including the event recorder data, forward-facing locomotive camera video footage, phone and radio transmission recordings, records of mechanical and track inspection and maintenance, and records related to the train crew's work history, qualification, and rules compliance. Also, FRA subpoenaed the engineer's cell phone records, which we shared with the NTSB.

FRA personnel also assisted in conducting interviews with passengers to ascertain their location inside the cars and their use of emergency egress points, as well as with emergency responders to identify any problems with the initial rescue efforts.

Over the subsequent six days, FRA personnel continued their close work with the NTSB to conduct additional inspection, testing, and research. The investigation team collected, verified and analyzed data related to:
(1) the track condition;

(2) on-board mechanical equipment including, the locomotive throttle, alerter, braking system, event recorder; and
(3) locomotive cab and wayside signal operation.

FRA also interviewed Amtrak, Conrail and Southeastern Pennsylvania Transportation Authority employees. Three personnel from U.S. DOT's Volpe National Transportation Systems Center traveled to the accident site to support FRA and NTSB in collecting information about the crashworthiness performance of the passenger cars.

As has been widely covered by the media, FRA's and NTSB's investigation revealed that as Train 188 approached the curve from the south, it was traveling over a straightaway with a maximum authorized passenger train speed of 80 mph. The maximum authorized passenger train speed for the curve was 50 mph. The event recorder data indicate that the train was traveling approximately 106 mph when it was in the curve's 50-mph speed restriction, exceeding the maximum authorized speed on the straightaway by 26 mph, and the maximum authorized speed of the curve by 56 mph.[1]

The event recorder data also indicate the locomotive engineer made an emergency application of Train 188's air brake system, slowing the train to approximately 102 mph before derailing in the curve.

FRA's Investigation

FRA's primary goal in its investigation is to prevent this type of accident from ever occurring again by determining whether the railroad or its employees violated any statutes, regulations or orders, and whether any immediate enforcement or corrective action is necessary to remedy the circumstances related to the accident. The FRA Investigator in Charge (IIC) is working closely with our mechanical, operating practice, signal, and track disciplines to determine if any federal regulations were violated and to ensure that all of Amtrak's safety and operating rules were followed. This includes compliance with hours of service laws and regulations, electronic devices prohibitions, track and signal inspections, and numerous other requirements.

Immediate Response and Initial Steps

In response to the derailment, FRA instructed Amtrak to take immediate actions to ensure the safe operation of passenger trains on the Northeast Corridor (NEC). FRA has formalized these requirements in its May 21st Emergency Order No. 31 (EO 31). The Order contains the following requirements[2]:

[1] FRA regulations provide, in part, that it is unlawful to "[o]perate a train or locomotive at a speed which exceeds the maximum authorized limit by at least 10 miles per hour." 49 CFR 240.305(a)(2).
[2] EO 31's requirements will not apply where Amtrak's Positive Train Control System (Advanced Civil Speed Enforcement System II (ACSES II)) is already in use on the NEC. Among other features, ACSES II enforces civil speed restrictions that are in place at locations such as curves and bridges.

- Amtrak must immediately implement code changes to its Automatic Train Control (ATC) System to enforce the passenger train speed limit ahead of the curve at Frankford Junction. This was completed on May 17th.

- By May 26th, Amtrak must survey the NEC ATC system and identify each main track curve where there is a reduction of more than 20 mph from the maximum authorized approach speed to that curve for passenger trains, and provide a list of each curve location to FRA. This list was submitted to FRA on May 26th.

- By June 10th, Amtrak must submit an action plan for FRA-approval identifying modifications to its ATC System (or other signal systems) that Amtrak will make to enable warning and enforcement of applicable passenger train speeds at the identified curves. If such modifications would interfere with the timely implementation of a PTC system or are not otherwise feasible, Amtrak's plan must describe alternative procedures that it will adopt at the identified curves to ensure compliance with applicable passenger train speed limits. Amtrak's plan must also contain milestones and target dates for completion of action plan items. FRA must approve or disapprove Amtrak's plan within 15 days of the plan's submission to FRA.

- By June 20th, Amtrak must begin to install additional wayside signage throughout its NEC system alerting engineers and conductors of the maximum authorized passenger train speed, with particular emphasis on additional signage at the curve locations where significant speed reductions occur. (Amtrak must identify the locations where it intends to install the additional wayside speed limit signs in its action plan, and must notify FRA when installation of the signs is completed.)

FRA instructed Amtrak that prior to restarting service, the railroad would have to complete the code change at Frankford Junction. Following my direction, Amtrak modified its signal system near the curve before resuming passenger train service through Philadelphia on May 18, 2015.

Amtrak has also provided FRA a list of all curves on the NEC and the applicable speed differentials for those curves, and stated to FRA that they have already begun work to make ATC System modifications at certain higher risk curves that they have identified.

POSITIVE TRAIN CONTROL (PTC)

Positive Train Control technology is the single most important railroad safety technological development in more than a century. The Rail Safety Improvement Act of 2008 (RSIA) mandated that the technology be implemented on certain railroads and routes by December 31, 2015. FRA feels strongly that the deadline of December 31, 2015, is an important mandate for the implementation of PTC and our agency intends to enforce it.

Prior to the May 12th derailment, and since the incident, the FRA has worked diligently to assist railroads with PTC implementation planning and execution. We will continue to do so until every Class 1, intercity passenger, and commuter railroad has implemented PTC successfully. I have established a PTC Implementation Team that is aggressively managing

this critical, Congressionally-mandated safety technology that will reduce the risk of human factor caused accidents and save lives.

For more than three years, FRA has been sounding the alarm that most railroads have not made sufficient progress to meet the December 2015 deadline. We have noted that the certification and installation of PTC systems are significant undertakings. FRA even highlighted its concerns about PTC implementation in its August 2012 PTC report to Congress, as well as in the GROW AMERICA Act[3].

FRA has long stated that a lack of public sector funding may cause unwanted delays in fully implementing PTC. FRA has requested funding for PTC development and implementation grants in every budget request dating back to Fiscal Year (FY) 2011. For the past two years, as part of the GROW AMERICA Act, FRA has requested $825 million to assist commuter railroads with the implementation of PTC, as well as additional funding to aid with the implementation of PTC on Amtrak's national network.

FRA will send a follow up report to the Congress in June, as called for by the House Committee on Appropriations.

Despite a lack of funding directed to commuter railroads, FRA is using the resources it has available now to assist railroads in implementing PTC. For example, FRA issued a $967.1 million loan through the Railroad Rehabilitation and Improvement Financing (RRIF) program to the New York Metropolitan Transportation Authority, the nation's largest commuter railroad provider, to facilitate the deployment of the technology.

In recent months, stakeholders and the Congress have asked FRA for guidance on how to approach concerns about railroads not meeting the mandated deadline. To address those concerns, the GROW AMERICA Act the Department submitted to Congress in April 2014 and March 2015 proposed that FRA be granted authority to review, approve, and certify PTC Safety Plans on an individual basis. FRA asked for this authority in order to ensure railroads were raising the bar on safety and have appropriate back stops in place even as they continue to work towards full implementation.

Positive Train Control Technology Description

Positive Train Control refers to an integrated set of advanced technologies, that when fully and properly configured, can prevent certain accidents caused by human factors including (1) train-to-train collisions; (2) over-speed derailments; (3) incursions into established work zones; and (4) the movement of a train through a switch left in the wrong position.

PTC systems use digital radio communications, Global Positioning System (GPS), and fixed wayside signal systems to send and receive a continuous stream of data about the location,

[3]The Secretary of Transportation submitted the GROW AMERICA Act to Congress on March 30, 2015. "GROW AMERICA" stands for "Generating Renewal, Opportunity, and Work with Accelerated Mobility, Efficiency, and Rebuilding of Infrastructure and Communities throughout America."

direction, and speed of trains. Such systems process this information in real time to aid dispatchers and trains crews in safely and efficiently managing train movements through automatic application of train brakes whenever the crew of a train, for whatever reason, fails to properly operate within the limits of its authority.

All PTC systems consist of four basic subsystems: Office; Wayside; Onboard; and Communications. Two basic PTC systems are being adopted by the majority of railroads in North America reflecting two different technical approaches to achieving the required functional capabilities. PTC systems can be "Vital" or "Non-Vital," and may be "Overlay" or "Standalone" but whichever technology or configuration is used, the system must provide an equivalent or higher level of operating safety than that which it replaces.

PTC systems must also provide for interoperability in a manner that allows for equipped locomotives traversing another railroad's PTC-equipped territories to communicate with and respond to that other railroad's PTC system, including uninterrupted movements over property boundaries. With limited exceptions and exclusions, PTC is required to be installed and implemented on Class I railroad main lines--lines with 5 million or more gross tons annually – over which any poisonous or toxic by inhalation hazardous materials are transported. By statute, the technology is also mandated on any railroad's main line over which regularly scheduled passenger intercity or commuter operations are conducted. It is currently estimated this will equate to approximately 70,000 route miles of track and will involve approximately 20,000 locomotives.

HUMAN FACTOR ISSUES

Simply put, human factors include all the individual and group behaviors and activities that affect railroad system performance. While railroad safety overall has improved, human factors continue to be the leading cause of train accidents, accounting for 38 percent of all train accidents in FY 2014.

Our human factors efforts have focused on: (1) promoting the adoption and enforcement of clear and unambiguous operating rules by railroads; (2) the development and use of effective and consistent training and efficiency testing; (3) fostering strong safety cultures based upon individual and organizational accountability; (4) strengthening fitness for duty requirements; and (5) advancing technological innovations that enhance on the job performance.

During the last several years, FRA has completed several rulemakings, reports, guidance documents, and other actions to address a wide range of human factor issues. All of these are important milestones that guide our ongoing efforts to improve safety in this area:

Rulemakings:

> **Conductor Certification:** Final rule requires a railroad to have a formal program for certifying train conductors and ensure that only those persons who meet minimum Federal safety standards serve as conductors. *See 76 Fed. Reg. 69802 (Nov. 9, 2011); 77 Fed. Reg. 6482 (Feb. 8, 2012). Effective Feb. 8, 2012. 49 C.F.R Part 242.*

Training, Qualification, and Oversight for Safety-Related Railroad Employees: Final rule establishes minimum training standards for each class or craft of safety-related railroad employees. The rule requires the qualification and documentation of the proficiency of such employees on their knowledge of and ability to comply with Federal railroad safety laws and regulations and the employing railroad company's rules and procedures implementing those laws and regulations. *See 79 Fed. Reg. 66459 (Nov. 7, 2014). Effective Jan. 6, 2015. 49 C.F.R Part 243.*

Critical Incident Stress Plans: Final rule mandates that certain railroads (each Class I railroad, intercity passenger railroad, and commuter railroad) have a plan that may help mitigate the long-term negative effects of critical incidents upon railroad employees and the impact of performing safety-sensitive duties in the days following such incidents, when the associated stress may hinder their ability to perform such duties safely. *See 79 Fed. Reg. 16218 (Mar. 25, 2014). Effective June 23, 2014. 49 C.F.R Part 272.*

Hours of Service of Railroad Employees; Substantive Regulations for Train Employees Providing Commuter and Intercity Rail Passenger Transportation; Conforming Amendments to Recordkeeping Requirements: Final Rule draws on detailed research into the causes of train operator fatigue and analysis of thousands of operator work patterns. FRA also published in the *Federal Register* three detailed statements of agency policy and interpretation to clarify the hours of service laws as amended by the Rail Safety Improvement Act of 2008. *See Final Rule 76 FR 50360 (Aug. 12, 2011). Effective Oct. 15, 2011. 49 C.F.R Part 228. Interpretations issued: 74 Fed. Reg. 30665 (June 26, 2009); 77 Fed. Reg. 12408 (Feb. 29, 2012); 78 Fed. Reg. 58830 (Sept. 24, 2013).*

Restrictions on Railroad Operating Employees' Use of Cellular Telephones and Other Electronic Devices: Final rule prohibits distracted operation of trains supplemented by an FRA-led industry-wide initiative to combat the dangers of electronic device distraction in the railroad workplace. *See 75 Fed. Reg. 59580 (Sept. 27, 2010). Effective Mar. 28, 2011. 49 C.F.R Part 220.*

Railroad Workplace Safety; Adjacent-Track On-Track Safety for Roadway Workers: Final rule requires adjacent-track protection for certain roadway work groups. *See 79 Fed. Reg. 1743 (Jan. 10, 2014). Effective July 1, 2014. 49 C.F.R Part 214.*

The following are additional regulatory actions that are under development:

Control of Alcohol and Drug Use: Coverage of Maintenance of Way Employees, Retrospective Regulatory Review-Based Amendments: Proposed Rule to extend FRA's alcohol and drug regulations to maintenance of way employees, contractors, and subcontractors. Also, makes other substantive amendments that either respond to National Transportation Safety Board (NTSB) recommendations or update and clarify the alcohol and drug regulations based on a retrospective analysis. *See 79 Fed. Reg. 43830 (July 28, 2014). 49 C.F.R Part 219.*

Railroad System Safety Programs: FRA published a notice of proposed rulemaking (NPRM) in 2012 that proposed to require commuter and intercity passenger railroads to develop and implement a system safety program (SSP) to improve the safety of their operations. As proposed in the NPRM, an SSP would be a structured program with proactive processes and procedures developed and implemented by commuter and intercity passenger railroads to identify and mitigate or eliminate hazards and the resulting risks on each railroad's system. A draft final rule is in review in the Department.

Train Crew Staffing: Potential Actions that will seek to address any safety risks posed to railroad employees, the general public, and the environment by one-person train crews.

Inward- and Outward-Facing Recording Devices Mounted in Controlling Locomotive Cabs: FRA is preparing a proposed rulemaking addressing the installation and use of recording devices in locomotive cabs.

Fatigue Management Programs: FRA is considering taking actions to mitigate the risks associated with fatigue-related safety hazards.

In addition to the completed and ongoing regulatory activities cited above, FRA is aggressively advancing proactive safety-based programs that analyze risks, identify hazards, and put in place customized plans to eliminate those risks. These include the Confidential Close Call Reporting System (C^3RS) and Clear Signal for Action.

Confidential Close Call Reporting System (C^3RS)
C^3RS is an FRA-funded voluntary program that improves safety by using proven practices like hazard identification, risk mitigation, and continuous safety improvements. It embodies positive safety culture elements. It is based on learning about potentially unsafe conditions, or close call events, that pose the risk of more serious consequences. There are eight railroads participating in C^3RS (1 – intercity passenger, 5 – commuter, 1 – short line, and 1-Class I). The program relies upon third party collection and analysis of anonymized reports of near misses or close calls that could have resulted in an accident or incident but did not. Several railroads are expanding their participation in C^3RS to other crafts. In addition to FRA, stakeholders include labor organizations, railroads, and the National Aeronautical and Space Administration. C^3RS provides a foundation upon which participants can learn what happened in close call incidents industrywide and use the information to prevent similar or more serious incidents from recurring.

Clear Signal for Action (CSA)
CSA is a behavior-based safety process built on the behavioral research of Dr. Thomas Krause. CSA is an information gathering methodology that uses applied behavioral analysis to achieve continuous improvement in safety performance. CSA uses confidential data gathered by peer observers to measure safety performance. Peer observers gather data to identify and define critical safety-related behaviors and the frequency of these behaviors, and provide peer-to-peer feedback, as well as input into the overall safety improvement process.

Overall, CSA is a process that targets at-risk behaviors by first identifying and defining those behaviors, and then provides a structure to support the desired change in behavior.

CONCLUSION

Thank you for the opportunity to testify and answer your questions today. Safety is FRA's first priority, and we appreciate your attention and focus on issues related to the tragic Amtrak passenger train accident in Philadelphia.

We look forward to working with this Committee to improve our programs and make the American rail network as safe, reliable, and efficient as feasible. I will be happy to respond to your questions.

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House Committee on Transportation and Infrastructure
"Oversight of the Amtrak Accident in Philadelphia"
June 2, 2015

Republican Questions for the Record
Federal Railroad Administration

At the hearing we discussed the ability of transferring funding from the California High Speed Rail project to implementation of positive train control in California. Please provide your formal response to the question of whether that is possible and if not, please explain why.

Ms. Feinberg: The Federal Railroad Administration (FRA) awarded nearly $3.5 billion to the California High-Speed Rail Authority (CHSRA) under the High-Speed Intercity Passenger Rail (HSIPR) Program. This funding consists of $2.5 billion in American Recovery and Reinvestment Act of 2009 (ARRA) funds and $928 million from Fiscal Year 2010 appropriations. FRA has entered into binding grant/cooperative agreements with the CHSRA that commit these funds to CHSRA for the California High Speed Rail project. Under these agreements, FRA may not terminate this commitment based on a decision to transfer the funds to another project or projects.

Furthermore, FRA cannot transfer the ARRA funds under any circumstances because the funds were only available for obligation through September 30, 2012. An FRA transfer of ARRA funding would require a de-obligation of funds from the CHSRA and then an obligation of those funds to another project. Since the September 30, 2012 obligation deadline has passed, FRA is unable to obligate these funds for another purpose as, by law, the funds are no longer available for obligation.

At the hearing, Rep. Perry requested that you please provide how much of the American Recovery and Reinvestment Act funding was spent on positive train control projects, understanding that only $131.2 million, a very small percentage, would be required to fully implement PTC in the Northeast Corridor.

Ms. Feinberg: The High-Speed Intercity Passenger Rail (HSIPR) Program has funded nearly $10 billion in projects to improve or expand intercity passenger rail service across the United States. To accommodate trip time, speed, reliability, safety, and frequency improvements, some projects have installed signal upgrades that include the implementation of positive train control (PTC) technology. While difficult to assign specific costs to PTC elements in comprehensive signal system upgrades, FRA estimates that nearly $460 million in HSIPR Program funds have

gone to PTC projects or the PTC elements of broader improvement projects. This includes approximately $328 million in ARRA funds and $130 million in funds provided from FY09 and FY10 annual appropriations.

In addition to the $8 billion appropriated by Congress for the HSIPR Program under ARRA, Congress provided $1.3 billion in ARRA funds to Amtrak. Approximately $52 million of the $1.3 billion was dedicated to Amtrak PTC projects. Between the HSIPR and Amtrak programs, approximately $380 million in ARRA funds were dedicated to PTC-related activities.

Similarly, in your dialogue with Rep. Rokita regarding positive train control, you stated that "To be honest, to take the – all of the stimulus dollars and give it to Amtrak and class one to implement PTC, I'm not sure that was something that occurred to anyone. I don't think it was even discussed." Please explain whether there was any discussion of spending any stimulus funding on positive train control projects. Also, please explain why positive train control projects were not made a priority by the Administration in awarding the ARRA funding.

Ms. Feinberg: To clarify my comments, FRA did take PTC into consideration when awarding the $8 billion appropriated under ARRA for high-speed and intercity passenger rail. Communications and signalization improvements – including PTC – are eligible project expenses under FRA's HSIPR Program and FRA's notice of funding availability for the ARRA funds specifically required that if a project "involves improvements to railroad signaling/control systems, then the application must demonstrate that the proposed improvements are consistent with a comprehensive plan for complying with the requirements for PTC implementation under Section 104 of the Rail Safety Improvement Act of 2008."

Safety is a key criterion in FRA's grant programs, and the ARRA investments addressed a number of critical safety priorities, including PTC. As stated previously, approximately $328 million in HSIPR ARRA funds were dedicated to PTC projects or the PTC elements of broader improvement projects. The ARRA investments have also enhanced safety through track and bridge improvements, upgrades to highway-rail grade crossing safety measures, grade separations, and sealed corridor initiatives.

ARRA – which was enacted in direct response to the economic crisis to jumpstart the economy, create and save jobs, and invest in infrastructure – was signed into law 125 days after the October 16, 2008, enactment of the Rail Safety Improvement Act of 2008 (RSIA). The RSIA mandated the December 31, 2015, PTC implementation deadline and required certain railroads to submit PTC Implementation Plans to FRA by April 16, 2010, to document the activities and schedules those railroads would take to complete PTC installation by the December 31, 2015, deadline. Railroads had not yet developed their PTC Implementation Plans when Congress appropriated the ARRA funds in February 2009 or when the Department of Transportation

announced the ARRA award recipients in January 2010. Moreover, the major Class I freight railroads in the U.S. are privately owned and generally profitable. Following the recession in 2008 and 2009, railroad revenues grew from $46 billion to over $70 billion and net income grew from nearly $7 billion to around $14 billion which is a factor to be considered with their respective ability to invest in PTC.

In addition to mandating the December 31, 2015 PTC implementation deadline, the RSIA also established the Railroad Safety Technology Grants Program to assist in the deployment of PTC and other rail safety technology. Congress appropriated $50 million for the program in Fiscal Year 2010. FRA awarded these funds to ten projects to help mitigate technical PTC deployment challenges affecting stakeholders. FRA subsequently requested additional funding for railroad safety technology and PTC implementation grants in every budget request since Fiscal Year 2011. Public sector funding is a necessity if PTC is to be implemented on our intercity passenger and commuter railroads.

QUESTIONS FOR THE RECORD
THE HONORABLE ANDRE CARSON
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
HEARING ON
"OVERSIGHT OF THE AMTRAK ACCIDENT IN PHILADELPHIA"
JUNE 2, 2015

Ms. Sarah Feinberg, Acting Administrator, Federal Railroad Administration

Improving Regional Coordination – Chairman Barletta and I just concluded a very informative roundtable in Philadelphia last week for our Emergency Management Subcommittee. We talked with state and local officials about mitigating disaster costs and regional disaster preparation with state and local officials. Philadelphia's Fire Chief pointed out that before the Amtrak accident, the area had recently held a mass casualty drill. But I was stunned when he told us that Amtrak wasn't included. As a former first responder, I know how important it is to have strong plans in place before emergencies – natural and man-made. I'd like to hear from each witness what you've learned from this tragedy that could prevent this happening again? Could the emergency response have been improved?

Ms. Feinberg: Both NTSB and FRA agree that over-speed was a major factor in the May 12, 2015, Philadelphia, derailment. The PTC system that RSIA mandates be installed by December 31, 2015, is designed to prevent over-speed derailments. If a PTC system had been in place, it would have prevented that accident. Amtrak has committed to completing it by the statutory deadline. FRA's immediate response to the accident was the issuance of Emergency Order No. 31, which called for Amtrak to make code changes to the Automatic Train Control (ATC) system at Frankford Junction, to identify each curve and provide a plan to FRA for protecting curves requiring a 20-mph or more drop in maximum operating speed, etc. On June 9 FRA issued Safety Advisory 2015-03, which recommended that all commuter lines review FRA's safety advisory issued after the December 2013 Metro-North derailment in the Bronx, which recommended they have two qualified persons in the controlling locomotive cab if ATC is not in place and install signage where speeds drop by 20 mph or more due to curves.

About your last question, concerning the emergency response to the Amtrak derailment in Philadelphia, NTSB, which has the lead on that investigation, would be the best source of information on the subject of the emergency response to that accident at this time. As you know, FRA is not allowed to release information about this accident until the NTSB has released the information.

QUESTIONS FOR THE RECORD
THE HONORABLE PETER DEFAZIO
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
HEARING ON
"OVERSIGHT OF THE AMTRAK ACCIDENT IN PHILADELPHIA"

JUNE 2, 2015

Ms. Sarah Feinberg, Acting Administrator, Federal Railroad Administration

Since the Metrolink accident in Chatsworth, California, in 2008, the NTSB has recommended that railroads install crash- and fire-protected inward-facing cameras that provide a minimum of 12 continuous hours of audio and imaging in all locomotive cabs. The NTSB indicated in a special investigation of the Metro-North accidents that FRA was amenable to requiring inward-facing cameras but that no actions had been taken to implement the recommendation. What has FRA done on this issue?

Ms. Feinberg: FRA is preparing a proposed rulemaking addressing the installation and use of recording devices in locomotive cabs. In the summer of 2013, FRA became involved in various camera projects occurring in the railroad industry and in November 2013 placed a rulemaking on FRA's internal rulemaking agenda for 2014. FRA presented a task statement on this issue to the Railroad Safety Advisory Committee (RSAC) for its consideration, which the RSAC accepted. The RSAC formed the Recording Device Working Group (that included FRA representatives) and met several times in 2014-2015 to discuss regulatory proposals addressing the installation and use of locomotive video and audio recorders, but did not reach consensus on regulatory language. At the full RSAC meeting held May 28, 2015, FRA closed the Working Group and announced its intention to draft and publish a Notice of Proposed Rulemaking (NPRM) that would require installation of locomotive-mounted recording devices.

FRA recognizes the potential value of image recording devices for accident investigation purposes and to advance safety. FRA believes the use of recording devices could be a valuable tool to discourage the prohibited use of personal electronic devices by railroad operating employees. FRA also is well aware of the privacy concerns presented by the installation and monitoring of recording devices, and will attempt to ensure recording device technology is regulated with appropriate controls in place. Finally, I also would like to note Metro-North, the Long Island Rail Road, and New Jersey Transit Rail Operations are all moving forward with installation of inward-facing cameras.

Did the President's budget request include funding to help passenger railroads implement PTC? If so, how much, and how much of that was for Amtrak and how much for the commuter railroads? Does the FY2016 House-passed transportation appropriations bill include that funding?

Ms. Feinberg: Yes. Like previous years, FRA again requested significant resources for PTC implementation in its latest budget request to Congress. FRA requested $825 million for commuter railroads PTC implementation for Fiscal Year (FY) 2016 and $3.05 billion over six years as part the Administration's GROW AMERICA Act surface transportation reauthorization legislative proposal

(H.R. 2410). In addition, FRA proposed making Amtrak PTC implementation an eligible activity under the proposed National Assets Program. FRA requested $475 million for FY 2016 and $2.43 billion over the six-year authorization period.

You mentioned that PTC is "not a new requirement for railroads." Do you believe the railroads have done all they can possibly do to implement PTC at this point in time?

Ms. Feinberg: The statutory requirement for installation of PTC has been known for seven years since the Rail Safety Improvement Act of 2008 (RSIA) was signed into law, and the regulatory requirements implementing the statute have been known for over four and a half years. Most of the railroads have taken some actions to implement PTC. Furthermore, some railroads will have completely deployed PTC, such as the Southern California Regional Rail Authority (known as Metrolink), or have made significant progress in deploying PTC, such as the BNSF Railway Company (BNSF) and Amtrak, despite sharing the same technical and programmatic issues as other railroads, is indicative of the railroads' level of effort – or lack thereof.

Current law requires each railroad to submit their PTC implementation safety plan to FRA for review and approval. A letter from FRA to the railroads earlier this year suggests that virtually none of the freight railroads have submitted their safety plans, even though it's been 7 years since the law was enacted. Which Class I freight railroads have submitted them? Have any freight rail PTC systems been certified?

Ms. Feinberg: Only one Class I freight railroad, BNSF, has submitted its PTC Safety Plan to FRA for certification of the Interoperable Electronic Train Management System (I-ETMS). FRA has certified the BNSF's PTC implementation as a non-vital overlay system. BNSF is aggressively deploying the non-vital system I-ETMS system across its network while it carries out the additional engineering to qualify the I-ETMS system as a vital overlay. No other Class I freight railroads have submitted their PTC Safety Plans for system certification.

The FRA Emergency Order issued on May 21 states that Amtrak's passenger trains are normally operated with only one crewmember in the cab of a passenger train's locomotive. What concerns does FRA have with one-man crews? What is FRA doing about it?

Ms. Feinberg: FRA is drafting a regulation that proposes requiring a second crewmember on most freight trains, even those operating over PTC operational territory. Conductors perform many critical duties that will still have to be performed even after implementation of PTC. FRA's proposal would maintain the status quo, which is primarily the use of two crewmembers. Under the proposal, FRA would have the opportunity to evaluate each railroad's operation to determine if removing the second crewmember could be done safely, whether the impetus is PTC installation, the installation of other technologies, changes to operating practices, or some combination of these or other factors.

FRA's proposed regulation is a proactive approach to an emerging safety issue. Without a regulation, FRA cannot be as effective in its oversight of railroad operations because the agency would have to be reactive. As mentioned, we believe that FRA should have the opportunity to fully evaluate a railroad's operation when significant changes have been made-such as PTC, in order to ensure full consideration of all safety implications.

You mentioned Positive Train Control "is a game changer," yet some railroads maintain PTC has no safety benefits. What is your response to this?

Ms. Feinberg: PTC is the single most important railroad safety technological development in more than a century. The PTC that the Rail Safety Improvement Act of 2008 requires is designed to prevent train-to-train collisions, over-speed derailments, train incursions into established work zones, and movement of a train through a switch left in the wrong position. It is absolutely necessary for the railroads subject to the PTC mandate to implement PTC to ensure the kind of safety that we expect on our rail system. As I have stated before the Congress previously, and as I will state again today, in no uncertain terms, safety is FRA's top priority. Simply put, the rail system is not as safe as it could be without full implementation of PTC.

Mr. Pierce mentioned that very little progress has been made on fatigue since enactment of the Rail Safety Improvement Act of 2008. Can you comment on this?

Ms. Feinberg: Following enactment of RSIA on October 16, 2008, FRA has published detailed interpretations of the hours of service laws as amended and mandated regulations on camp cars used as employee sleeping quarters. In addition, FRA worked with RSAC to develop updated hours of service recordkeeping regulations reflecting the RSIA amendments, to promote compliance with the amended laws and two different substantive regulations related to fatigue in the railroad industry, namely the Passenger Train Employee Hours of Service Regulation, and the Fatigue Risk Management Program Regulation.

On August 12, 2011, FRA published its final rule governing the hours of service for passenger train employees (e.g. engineers and conductors on passenger trains). In addition to converting into regulations the hours of service laws as they existed prior to the enactment of RSIA that applied to passenger train employees, the rule added several new protections based on the current understanding of fatigue science, including the following:

- Extended rest periods are required to prevent risk from cumulative fatigue (the consecutive-days limitation):
  - 2 consecutive calendar days off, after an employee has worked during a 14-day period without having a total of 2 days off; and
  - 24 hours off, after an employee has worked 6 consecutive days including at least 1 nighttime assignment.
- Railroads must use an FRA-approved, scientifically valid, biomathematical model of performance and fatigue (fatigue model) to identify the fatigue implications of the schedules that their passenger train employees work. Schedules that put the employee at risk for a level of fatigue at which safety may be compromised (a level called the "fatigue threshold") have to be submitted for FRA approval. Such schedules must be mitigated or declared by the railroad and approved by FRA as operationally necessary. Railroads that do not have access to the validated biomathematical models can send schedule information to FRA, and FRA will perform the analysis for that railroad.

RSIA also mandates that the Secretary issue regulations requiring that Class I railroads, railroads deemed to have inadequate safety performance, and railroads providing intercity rail passenger or commuter rail passenger transportation develop and implement risk reduction programs. RSIA establishes that a fatigue management plan is a required component of the risk reduction program, and sets forth various requirements for a fatigue management plan.

- On December 8, 2011, RSAC voted to establish a Fatigue Risk Management Program Working Group to address that aspect of the system risk reduction program. The working group concluded its work in September 2013. The Working Group assisted FRA with the development of rule text and a number of guidance documents that would respond to the requirements set forth in Section 20156. That rule text forms the basis for the text of the NPRM.
- The Fatigue Management Plans NPRM has been delayed as a result of agency resources being diverted to higher priority issues. In addition, because the Fatigue Management Plans NPRM would contain cross-references to the requirements for system safety and risk reduction programs, of which fatigue management plans are a required component, its completion has been dependent on the progress of those regulations.

FRA continues to audit both freight and passenger railroads' compliance with hours of service and fatigue management requirements by reviewing employees' hours of service records, and FRA audits passenger train employee work schedules and fatigue mitigation tools at least every two years.

Further, in June 2012, FRA launched the Web site The Railroader's Guide to Healthy Sleep (http://www.railroadersleep.org/), which FRA and the John A. Volpe National Transportation Systems Center in Cambridge, Massachusetts, produced, in collaboration with experts in sleep health from the Harvard Medical School Division of Sleep Medicine and experts in educational media from the WGBH Educational Foundation. The Web site provides articles, videos, and illustrations to help railroaders sleep well and balance work-life commitments. The Web site also suggests practical steps railroaders may take to help combat fatigue and explains how to determine one's individual sleep needs and tune into normal daily ups and downs in alertness and sleepiness. Additionally, the Web site provides self-tests to assess one's sleep and learn the symptoms that may suggest a possible sleep disorder. The Web site also includes information on how to find a sleep specialist in one's geographic area.

Finally, in the GROW AMERICA Act submitted in 2014 and 2015, FRA again seeks full authority to issue science-based, hours of service regulations for the employees who remain subject to the hours of service laws (all other train crews as well as signal maintainers and dispatchers). This authority would enable FRA to substitute well-founded regulations for the inadequate protections of the hours of service laws.

Statement of Dennis R. Pierce
National President, Brotherhood of Locomotive Engineers and Trainmen
and
President, Teamsters Rail Conference
Before the United States House of Representatives
Committee on Transportation and Infrastructure
Hearing on
Oversight of the Amtrak Accident in Philadelphia
June 2, 2015

Good morning, Chairman Shuster, Ranking Member DeFazio, and Members of the Committee. My name is Dennis Pierce and I am the National President of the Brotherhood of Locomotive Engineers and Trainmen, or BLET, which has nearly 39,000 active members; I also am the President of the 70,000-member Rail Conference of the International Brotherhood of Teamsters. My testimony today will encompass the views and concerns of both groups.

I would like to begin by offering my most sincere condolences to the victims of the tragic Amtrak 188 accident and to their families. One of the most difficult parts of my job is when I have to convey the BLET's sorrow to the families of members killed in the line of duty. I have had to do that eleven times — to the families of Glenn Steele, Chance Gober, Dan Hall, John Hall, Todd Burckhard, J. G. Hadden, Chris Carter, Tom Anderson, Tom Kenny, Stanley Watts and Darrell Amerson — since I became BLET National President on July 1, 2010, and unfortunately I fear that I will have to do it many more times during my tenure.

What is even more difficult to accept is when proven safety technology exists that could have prevented even one of those deaths. In fact, of the eleven names I just mentioned, five of those deaths could have been prevented by Positive Train Control alone. Further, for the period from 2005 through 2013, the NTSB completed 16 investigations of railroad accidents that could have been prevented or mitigated with Positive Train Control (PTC). These 16 accidents claimed 52 lives and injured 942 others; the damages totaled hundreds of millions of dollars. These figures exclude the PTC-preventable accidents that NTSB did not investigate. So believe me when I say that I share the frustration of those whose lives have been forever changed by the Amtrak 188 tragedy.

As background information, the BLET's Safety Task Force is a party to the ongoing National Transportation Safety Board investigation of Amtrak 188. An investigative team from the Brotherhood of Maintenance of Way Employes Division of the Teamsters Rail Conference also is assisting in the investigation. Both Organizations are governed by the NTSB's confidentiality rules and, therefore, and have been asked not disclose any investigative information that may have come to our attention unless it has been publicly released by the NTSB.

In this regard, the NTSB has publicly commented on two points. One is that excess train speed at the Frankford Junction curve contributed to Amtrak 188 leaving the tracks. The other is that this accident would not have occurred if PTC, as an overlay on top of the existing signal system, had been operational.

Beyond that, I can tell you that the Amtrak 188 tragedy places a number of core elements of federal oversight of the nation's railroads front and center. One is the statutory mandate that PTC be implemented by year's end. Another is the safety redundancy afforded by maintaining two-person crews in locomotive cabs. A third is the vexing issue of crew fatigue. Fourth, I want to briefly address inward-facing cameras as I am certain that subject will come up during this hearing. And, finally, I want to comment on the nation's expectations for Amtrak.

But before I turn to those issues, I'd like to spend a few moments giving you — and all those watching — the unique perspective shared by locomotive engineers and, indeed, all railroad operating employees. It is important that you spend a few minutes in our shoes, because what non-railroaders see as solutions to problems often bring with them adverse unintended consequences that we can identify in advance.

About one in ten thousand Americans is a working locomotive engineer today. We comprise one of the most highly skilled, highly trained and highly regulated and federally licensed professions in the nation's workforce. Our work is very dangerous, with the potential for catastrophe — for ourselves, our co-workers, the traveling public and the communities through which we work — always lurking in the background, as May 12th starkly reminds us.

Just as in nearly every other workplace over the past couple of decades, technology has revolutionized the workplace of locomotive engineers in freight and passenger service. In fact, the efficiency and the productivity of today's locomotive engineer are at levels that couldn't be imagined 50 years ago.

But the increased efficiency and productivity due in part to various technologies are increasingly being offset by heightened safety risks:

- The use of "distributed power" or DP locomotives — which are strategically placed in the middle or at the rear of freight trains even though they are controlled by the engineer on the lead locomotive — allows railroads to run much longer and heavier trains with one crew … that's good in terms of efficiency and productivity. However, the engineer must divide his attention in order to monitor and control those sets of locomotives separately, including constantly making separate mental calculations to operate each set of locomotives … and that increases risk.

- A large number of locomotives are equipped with "fuel saver" technology, which optimizes fuel consumption through a series of computer calculations … again, good for efficiency and productivity. However, the system records all locomotive activity and if the engineer substitutes his or her professional judgment and experience for the computer algorithm, the engineer could suffer employment sanctions … again, there is increased risk because the system punishes exercises of professional judgment and experience.

- Virtually every locomotive in America is equipped with an "event recorder" that records dozens of locomotive activities … which, once more, is good for efficiency and productivity. However, event recorder data is routinely downloaded during a trip, and then analyzed by a computer program that looks for — among things — rapid manipulation of the throttle that increases fuel usage or rapid braking that more quickly wears out brake shoes

> on locomotives and cars. When an anomaly is discovered, the computer automatically notifies someone in railroad management, which leads to a more in-depth investigation and, all too often, causes the engineer to suffer employment sanctions even when no accident or incident results ... once more, risk is increased because the system punishes exercises of professional judgment and experience.

A typical workday for today's freight locomotive engineer consists of up to12 hours of monitoring and operating multiple train control systems, all the while doing his or her best to avoid the pitfalls presented by fuel saver and event recorder technologies, all of which distracts the engineer from focusing on the external environment in which the train is operating. Similar distractions exist for passenger and commuter engineers, who have to account for every minute of delay during their trip, even if the train's schedule allows that time to be made up when the train arrives at its final destination.

Today's operating environment also increases risk because engineers are punished for taking steps to avert a potential emergent situation. When I was a young locomotive engineer, the "old timers" used to tell me, "If you think you need to use your emergency brakes to avoid a problem and don't do it immediately, you're already too late." Today, I am convinced that preventable train accidents and incidents are occurring due to the fact that engineers have been trained under threat of discipline to ***never*** apply the emergency brake. When they do, even if it is to avoid an unsafe situation, engineers are routinely charged with a violation of railroad policy. In other words, the foundation of today's operation leads to accidents in situations where they wouldn't have happened in the past.

The fact of the matter is that the level of vigilance required of a locomotive engineer has reached the point of task overload in many parts of the industry. And when too much is expected of any system — whether man or machine — some type of breakdown is inevitable.

It's fashionable to look for a single cause of an accident, and when the cause appears to be a human error that usually seems to be the end of the inquiry. It's been said that if people would just not make mistakes then everything would work fine ... their otherwise faultless systems would run smoothly and without incident.

Anyone who engages in root cause accident analysis will tell you this is an oversimplification that punishes the person, in most cases an employee, and camouflages underlying systemic problems. If drivers obeyed every speed sign and every traffic law and never made mistakes there would be no car collisions; yet we mandate seatbelts and airbags because we know humans are not infallible. Because weaknesses and shortcomings in equipment design and operational practices are generally found if a thorough root cause analysis of an accident is performed, the question really must evolve into "which humans" made errors that contributed to the accident in addition to the last human assumed to have made an error.

So, for example, we know that Amtrak's Automatic Train Control (ATC) system was active for westbound moves through Frankford Junction, but was not active for eastbound moves, such as the move Amtrak 188 was making at the time of the derailment. Amtrak has explained that the westbound speed reduction from 110 mph to 50 mph entailed a higher risk than the eastbound speed reduction from 80 mph to 50 mph, which made ATC activation for the westbound move a

higher priority. Was that decision a human error that contributed to the accident? Similarly, if we eventually learn that, for some reason, the engineer of Amtrak 188 became temporarily confused as to his location, it may be reasonable to conclude that the simple use of speed signs in the approach to the curve, as a reminder, may have prevented this accident. That would raise a question whether the decision not to post such signs was a human error that contributed to the accident.

It also may be true that Amtrak was forced to prioritize ATC installation the way it did because the railroad did not have sufficient resources to implement ATC on a faster scale, including financial resources. Did the decision to not appropriate sufficient funding to implement ATC on a faster scale constitute a human error that contributed to the accident? Our attention is currently focused on the engineer's actions or inactions on May 12th, and while those actions may have been the last link in a chain of events leading to the tragedy, they are far from being the only link. And, so, it is within this context that I will now turn to the current status of PTC.

I. Positive Train Control (PTC)

I'm not going to take this Committee's valuable time by providing a chapter and verse recitation of the history of PTC. We all know that the NTSB has been advocating this type of technology for more than 40 years. In fact, I recently saw a table that I believe the NTSB prepared, covering August of 1969 through the end of 2013, which detailed over 140 PTC preventable accidents that killed 288, injured over 6,500 and resulted in over $327 million in property damage. There has been PTC development, but no full implementation on any railroad throughout almost that entire period.

The final impetus for a PTC mandate was the September 12, 2008 head-on collision between a Metrolink commuter train and a Union Pacific freight train in Chatsworth, California. That accident claimed the lives of 25, and injured over 100 others who were on board. Congress responded swiftly — and appropriately — by enacting the Rail Safety Improvement Act of 2008 less than a month after the tragedy.

The RSIA established a December 31, 2015 deadline for PTC implementation on routes where it is required. However, significant segments of the industry began dragging their feet on PTC before the ink on the legislation was dry. These dilatory tactics included suing the Federal Railroad Administration in order to paralyze its rulemaking efforts to execute your mandate.

And even today industry lobbyists are telling you that the railroads need a blanket extension of five years. They also have built in a back door to their proposal that would add yet another two years to the deadline, pushing this life-saving technology all the way back to nearly 2023.

To be sure, there have been some significant problems. Obtaining radio spectrum has been difficult, particularly in some large metropolitan areas. And the Federal Communications Commission's process for approving radio towers was not designed for the volume of requests that PTC has triggered. These are legitimate roadblocks to a national implementation of PTC, and should be addressed as such.

But do these problems justify a blanket, industry-wide delay of 5–7 years? Amtrak doesn't think so. In fact, long before the May 12th tragedy Amtrak announced that it would be able to meet the

deadline. Coming from a railroad that relies so heavily on government funding, I think that says a great deal about whether the December 31, 2015 deadline is reasonable. Also — if my memory serves me correctly — BNSF Railway likewise plans to install PTC with or without a government mandate. These rail carriers should be commended for at least trying to meet the requirements of the law since it passed or even before it passed.

So I want to underscore today that you should not be stampeded into granting a blanket PTC delay. Address the legitimate peripheral problems, to be sure, but hold the industry's feet to the fire to implement as much as they can by the statutory deadline, and provide strong evidence of localized problems — to FRA's satisfaction — that may cause them to miss the deadline on some portions of their system. If you don't do that, you will reward bad behavior … punish BNSF and Amtrak for making PTC the economic priority you demanded in 2008 … and dishonor the memory of those who perished in Philadelphia on May 12th.

II. Crew Size

As much life-saving promise as PTC holds, it is by no means a silver bullet … it won't prevent every railroad accident because it's not designed to prevent every railroad accident. This is important to remember, because there are some who erroneously insist that deployment of PTC will render the second crew member in the locomotive cab unnecessary. On freight trains that second crew member is the conductor, and on many Amtrak intercity trains that do not operate on the Northeast Corridor it's a second locomotive engineer.

While PTC as an overlay on an existing signal system will, indeed, prevent many serious railroad accidents, it cannot replace a conductor or a second engineer because the technology doesn't do all the things that those crew members do. In addition to in-cab safety redundancy at numerous levels throughout the trip, the public safety aspect of the duties of this second engine crew member includes, among other things … monitoring the "left" side of the train for defects such as stuck brakes or shifted lading to mention just two … observing the "left" side of highway-rail grade crossings for drivers who fail to stop for the approaching train … and separating stopped trains that are blocking crossings, to facilitate the movement of motor vehicles operated by first responders and other emergency personnel who must cross the tracks.

Because we are here as a direct result of the Amtrak 188 accident, I also think it's important to summarize for the Committee how a lone engineer came to occupy the locomotive cab on that train because that question has been asked. Prior to 1983, crews for Amtrak trains on the Northeast Corridor and all commuter rail service in the Northeastern U.S. were provided by Conrail. The locomotives of conventional passenger and commuter trains were crewed by two individuals: an engineer and a fireman, each with separate duties and responsibilities. Multiple-unit passenger trains — such as the old Metroliners and non-locomotive-drawn commuter trains — had only an engineer, but the train crew had access to the operating cab at all times.

On August 13, 1981, the Congress passed the Northeast Rail Service Act of 1981, or NERSA, as part of the much larger Omnibus Budget Reconciliation Act of 1981. Section 1136 of NERSA relieved Conrail of any legal obligation to operate commuter service as of January 1, 1983, and Section 1165 relieved Conrail of any legal obligation to provide crews for intercity passenger service on the Northeast Corridor. Section 1143 of NERSA expressly eliminated the second en-

gine crew position on all locomotive-drawn commuter rail trains. Armed with that legislative precedent — and mindful of where its funding originated — Amtrak refused to crew Northeast Corridor trains after December 31, 1982, with any more than the one crew member identified by the Congress for the commuter trains running on the same tracks ... the locomotive engineer.

As you know, on April 13th, Congressman Young introduced the Safe Freight Act — H.R. 1763 — which would, if enacted, mandate that no freight train or light engine used in connection with the movement of freight may be operated unless it has a crew consisting of at least two individuals, one of whom is a certified locomotive engineer, and the other of whom is certified as a conductor. This is the same bill that was introduced as H.R. 3040 in the last Congress and had about 80 co-sponsors. Congressman Young's bill was referred to the Subcommittee on Railroads, Pipelines, and Hazardous Materials on April 14th, and we urge you to take action on the bill during this session. I would also suggest that the events of May 12th are cause for Congress to reconsider the 1981 NERSA language that eliminated the second set of eyes and ears on passenger and commuter trains on the Northeast Corridor.

III. Fatigue

Another oversight concern is crew member fatigue. Now, let me say at the outset that I am not suggesting fatigue was or may have been a causal factor in Amtrak 188. I don't believe that sufficient information has been obtained for anyone to make such a determination. However — and like PTC — fatigue mitigation has been a subject that NTSB has pointed to again and again as a causal factor in rail accidents.

This Committee knows well how serious this issue is. Hours of service laws governing operating employees were fundamentally overhauled by Congress in 2008, with enactment of the RSIA. But, I must tell you, I'm disappointed that very little progress has been made on this front since then.

Particularly troubling is the fact that post-accident discussions regarding how to prevent fatigue in the railroad industry have almost uniformly centered on processes to identify individual workers who may be suffering from a sleep disorder and removing them from work until they obtain medical treatment. Completely ignored are the very same fatigue factors that affect locomotive engineers and trainmen regardless of whether they have a sleep disorder — namely, poor lineup information and far too many surprise calls for work — that we have identified for more than a decade. Confirmed data has also shown that variable work cycles where engineers move from shift to shift routinely contribute to fatigue, yet very little has been done to address any of these issues.

The fact of the matter is that the only relief from fatigue the RSIA-driven changes have provided has come from additional time off duty and restrictions on contact by the railroad during statutory off-duty periods. Little meaningful progress has been made towards greater predictability of work schedules since you enacted RSIA nearly seven years ago, and the railroads have tightened down their attendance policies to the point where exhausted operating employees are going to work tired rather than risk discipline or dismissal by calling off fatigued. I am here to tell you that C-PAP machines that treat sleep apnea will not begin to solve the railroad industry's systemic crew fatigue problems when the involved employees are not given reliable predictions as to

when they need to get their rest. It is clear to me that Congressional oversight of railroad safety needs to ramp up its efforts regarding predictability of work.

IV. Inward facing Cameras

I also would strongly urge you not to blindly jump on the inward-facing camera bandwagon. These cameras are an accident investigation tool and not an accident prevention tool. Not a single life would have been saved if the locomotive cab on Amtrak 188 had been equipped with an inward-facing camera. Installation of cameras will provide the public nothing more than a false sense of security.

Over the 25 months since the first Class I freight railroad filed suit against us — seeking a judicial green light to install these cameras — we have engaged in countless discussions with individual railroads, groups of railroads, the Federal Railroad Administration, and within the FRA's Railroad Safety Advisory Committee. So what I'm about to say should come as no surprise to anyone in the industry who has been paying attention.

Our primary concerns are similar to many concerns in America; they are about privacy and the railroads using the camera data punitively against employees. On the privacy issue, engineers and trainmen are all but captives on locomotives for up to 12 hours, with no ability to ever leave the locomotive cab in many cases. Yet, more than 2 years into these discussions, the railroads continue to refuse to even consider shutting the cameras off when trains are stopped. This level of continual surveillance for up to 12 hours — whether the train is moving or stopped — and with no way to ever take even take a break from that surveillance is oppressive and un-American. Insofar as punitive use of video data against locomotive engineers and trainmen is concerned, you only need to review what has happened since you last revised Whistleblower protections found in 49 U.S.C. Section 20109 to confirm that many major railroads routinely retaliate against their employees. Our concerns are not without merit.

BLET has also made suggestions both to the freight carriers and to the FRA that the railroad industry follow the cockpit voice recorder model for the aviation industry. That model includes use of data for purposes of federal accident/incident investigation, with privacy protections enacted in law or regulation. It also provides for detailed, collectively bargained conditions on whether, when and how such data is used by a carrier in its own internal processes.

The industry has rejected these good faith proposals out of hand and — in light of the failure by the RSAC to reach consensus on a proposed inward-facing camera regulation — it is apparent that FRA will have to issue a regulation based on its best judgment. I sincerely hope FRA will give appropriate consideration to the legitimate problems we have identified. It is clear to our Organization that the money being spent on cameras would be better spent installing true lifesaving technology like PTC, which would actually prevent an accident as compared to getting film of that same accident. I expect we will have more for you to consider in the coming months, but felt it was important for you to hear our position directly.

V. Support for Amtrak

Finally, and with all due respect to the Speaker, some things do come down to dollars and cents, at least for Amtrak. That's why the railroad's PTC implementation deadline is December 31,

2015, and not December 31, 2014. It's why ATC was operational westbound at Frankford Junction on May 12th, but wasn't operational eastbound at that location. It's why Amtrak doesn't have a second crew member in the cab of the locomotive, all of these items cost money.

All U.S. transportation modes are federally supported but — relatively speaking — passenger rail receives crumbs. When compared to the rest of the world, federal support for Amtrak in the Number One economic power on the globe is nothing less than shameful. Last year, 5.8% of China's government spending was on rail, and one-half of one percent of the U.K.'s government spending was on rail. The U.S. share? A minuscule three one-hundredths of one percent.

Calculated as a percentage of gross domestic product, 2013 government investment in rail in Britain was four times the U.S. investment. The French and the Australians invested six times as much as we did. And over the past decade we have consistently lagged behind India, Russia and Turkey.

We cannot continue to demand that Amtrak operate a first-class railroad while at the same time funding it at Third World levels. We cannot expect reliable performance from the portions of the Northeast Corridor infrastructure that are 75 ... or 100 ... or 125 years old. And we shouldn't turn our noses up at a transportation mode that pays 85% of operating costs out of the farebox because of a retreat by some from the consensus in favor of federal support of transportation that dates back to before my 152-year-old Union was founded. It strains our collective memory to think of a case where we attack a problem by defunding it when we want a positive outcome. Programs or institutions that are defunded by Congress are defunded for one reason and one reason alone: so that they wither on the vine and die.

I'm going to resist the urge to climb up on my soapbox here, but I want to stress that the public transportation infrastructure upon which our nation and economy were built over generations is crumbling around our feet ... and that includes Amtrak. Amtrak is a good investment, and a necessary resource. And shortchanging Amtrak creates its own costs elsewhere. I strongly urge you to provide the resources necessary for Amtrak to thrive and grow, and not just to limp along.

Chairman Shuster and Ranking Member DeFazio, I appreciate the opportunity to address you today. Working together over the years with this Committee — and with the Railroads, Pipelines, and Hazardous Materials Subcommittee — much has been accomplished to enhance rail safety, and I look forward to working with you to implement the lessons learned from Amtrak 188. Thank you for inviting me to speak, and I will be happy to try to answer any questions the Committee may have.

QUESTIONS FOR THE RECORD
THE HONORABLE ANDRE CARSON
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
HEARING ON
"OVERSIGHT OF THE AMTRAK ACCIDENT IN PHILADELPHIA"
JUNE 2, 2015

Mr. Dennis R. Pierce, National President, Brotherhood of Locomotive Engineers and Trainmen

Improving Regional Coordination – Chairman Barletta and I just concluded a very informative roundtable in Philadelphia last week for our Emergency Management Subcommittee. We talked with state and local officials about mitigating disaster costs and regional disaster preparation with state and local officials. Philadelphia's Fire Chief pointed out that before the Amtrak accident, the area had recently held a mass casualty drill. But I was stunned when he told us that Amtrak wasn't included. As a former first responder, I know how important it is to have strong plans in place before emergencies – natural and man-made.

- I'd like to hear from each witness what you've learned from this tragedy that could prevent this happening again? Could the emergency response have been improved?

Response: While the investigation into this tragedy is ongoing, and identification of all causal factors is many months away, the most immediate conclusion that can be drawn at this stage is that the accident would have been prevented if a Positive Train Control (PTC) system had been overlaid on top of the signal system at the location where the accident occurred. This is a significant conclusion, because the railroad industry has requested that the Congress change the law to push back the December 31, 2015 deadline for PTC implementation by 5–7 years; this accident provides compelling evidence why the Congress should not grant that request. I am not in a position to comment on the emergency response because the BLET's accident investigators have not been involved in that aspect of the investigation.

QUESTIONS FOR THE RECORD
THE HONORABLE PETER DEFAZIO
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
HEARING ON
"OVERSIGHT OF THE AMTRAK ACCIDENT IN PHILADELPHIA"
JUNE 2, 2015

Mr. Dennis R. Pierce, National President, Brotherhood of Locomotive Engineers and Trainmen

- You mentioned that train crews can be "temporarily confused as to their location." I assume you are referring to "situational awareness." Is this a major issue? What contributes to this, and what can be done to address it?

Response: While the term "situational awareness" is an accurate descriptor for someone who, for example, is temporarily confused as to their location, it is important to understand that the term describes the result of certain causal factors, and is not — as some imply — a technical term to describe someone who is not paying attention. One known causal factor for loss of situational awareness is fatigue. Using the fatigue threshold established by the Federal Railroad Administration (FRA) in its passenger hours of service regulations as a guidepost, someone who is at a 70% alertness level has the same erosion of reaction time as a person having a .08 blood alcohol level; a fatigued person certainly is less situationally aware than someone else who is at a 100% alertness level. Another significant cause of loss of situational awareness is be "task overload" of the type explained in detail in my written testimony; technologies such as distributed locomotive power, fuel saver systems, and locomotive event recorders all require today's engineers to make many more mental calculations than in the past. These systems also hover over engineers' shoulders making a performance record that is frequently used to second-guess an engineer in a railroad disciplinary proceeding, even when there is no safe outcome; this creates an unsafe distraction for the engineer. These causes can be abated by, respectively, providing greater predictability for when someone will be expected to work, and by using locomotive technologies in a human-centric environment, rather than one designed to compete with or override the engineer in a non-emergent operating situation. Yet a third cause of situational awareness is distraction from the task at hand by external factors; further investigation of the reported rock-throwing in the area just prior to the Amtrak 188 accident may shed light on whether this also could have affected the engineer's performance.

- According to the Northeast Corridor Infrastructure and Operations Advisory Commission, $21.1 billion is needed to achieve a state-of-good repair on the NEC. Critical infrastructure needs include century-old bridges and tunnels like the Portal Bridge in New Jersey, the Baltimore and Potomac Tunnels in Maryland, and the Devon Bridge in Connecticut. What impact do you think this has on Amtrak and safety?

Response: The deteriorated state of much of the Northeast Corridor has a significant impact on service reliability, not only for Amtrak but also for MARC, Metro North and New Jersey Transit, who share the traffic choke points identified in the question. The negative impact on safety is just as great, albeit more insidious. The failure to provide Amtrak with sufficient funding to restore the Corridor to a state of good repair requires Amtrak to constantly divert personnel, and physical and financial resources — that otherwise could be devoted to improving safety and service reliability elsewhere — to patching together its crumbling bridges and tunnels for yet another while longer.

- Some railroads maintain that PTC has no safety benefits. What is your response to this?

Response: As I said in my testimony, the lives of five of the eleven BLET members who perished on the job since I became National President would have been spared had their trains been operating in PTC-equipped territory. That's not my conclusion; it is the conclusion of the National Transportation Safety Board. Those in the industry who decry PTC, pointing to a so-called "cost/benefit analysis" they base their argument on are no different, in my mind, to those in the 1960s who wanted to save $11 in retrofitting costs on the Ford Pintos to eliminate their tendency to explode when struck from the rear. As safe as the industry is, the potential for utter catastrophe lies in each accident, and the surviving residents of Lac Megantic, Quebec can confirm this sad fact. The January 6, 2005 accident and subsequent release of chlorine gas in Graniteville, South Carolina is one of the many accidents that would have been prevented had the line where the accident been equipped with an operable PTC system. A total of nine were killed in the accident, including BLET member Chris Seeling. Nonetheless, the railroad and the community were most fortunate, because the accident occurred at 2:39 a.m.; if the accident had happened 12 hours earlier or later the toll could easily have been unimaginable because of a full shift at the plant where the collision occurred, people on local roads, and a nearby middle school full of students. It is just that sort of "luck" that underlies the "cost/benefit analysis" to which anti-PTC advocates point.

- The FRA Emergency Order issued on May 21 states that Amtrak's passenger trains are normally operated with only one crewmember in the cab of a passenger train's locomotive. Why is having more than one crewmember in the cab important?

Response: As indicated in my written testimony, the removal of the second crewmember in Northeast Corridor locomotives was the direct result of enactment of the Northeast Rail Service Act of 1981, which removed the second crewmember from commuter locomotives operating on the same track. The second crewmember — whether a second passenger engineer certified pursuant to Federal Railroad Administration regulations, as is the case on many off-Corridor Amtrak trains, or a conductor also certified pursuant to Federal Railroad Administration regulations, as is the case on virtually all freight trains — enhances safety by providing a second set of eyes and ears to monitor the train and the route ahead. The second crewmember is in a position to monitor and inspect the "left" side of the train while on curves

for equipment or lading problems, which the engineer is never in a position to do. In areas where a train may be delayed and block a road crossing, the second crewmember makes it possible to split the train at the crossing to permit first responders and other emergency personnel to cross the tracks when necessary. And the second crewmember offsets some of the distractive effects of the various technologies identified in response to a previous question, such as distributive power locomotives and fuel saver technology, because that crewmember is not distracted by them.

- Would you support requiring inward-facing cameras with the same sort of confidentiality protections provided in law against the premature disclosure of aviation cockpit voice or video recordings? If so, have you made this suggestion to the railroads? If so, when and what was the response?

Response: The statutory restrictions on disclosure of aviation cockpit voice or video recordings apply to the National Transportation Safety Board only, but they are a necessary cornerstone for crafting an inward-facing camera program for railroad locomotives. Similar statutory restrictions also should apply to the Federal Railroad Administration. Moreover, there need to be strict controls on video and/or audio data that a railroad may possess in order to protect their confidentiality from public disclosure and other improper use. We have told this to the railroads and to the Federal Railroad Administration on many occasions, including during FRA's Railroad Safety Advisory Committee consideration of this issue. We also have stated that there is no safety reason for surveilling crews on trains that have stopped and are not moving, yet virtually every railroad has rejected our common sense proposals.

- The NTSB noted in its accident investigation of a rear-end train collision in Red Oak, Iowa, that such cameras "might also have a value in detecting and addressing fatigue among crewmembers." Would this information be helpful to your members in showing the prevalence of fatigue in the industry?

Response: I want to underscore, first, that inward-facing cameras are not an accident prevention tool; they are only an accident documenting and an accident investigating tool. To be sure, such cameras will document the prevalence of fatigue in the industry. However, I would not consider that to be helpful. The fact of the matter is that under the prevailing safety culture in the railroad industry, which dates back to the Civil War, capturing dozing crewmembers on camera will lead only to the dismissal of the employees who are filmed sleeping, despite the fact that railroads will never be able to fire their way out of fatigue. The Federal Railroad Administration, in conjunction with the John A. Volpe National Transportation Systems Center, has done detailed research concerning crew fatigue for decades. There is more than sufficient scientific evidence that establishes the causes of crew fatigue; what is missing is the industry's willingness to address those causes in a meaningful way.

PRELIMINARY REPORT

RAILROAD

DCA15MR010

The information in this report is preliminary and will be supplemented or corrected during the course of the investigation

On May 12, 2015, at 9:21 pm eastern standard time, northbound Amtrak passenger train no. 188 derailed at MP 81.62 near Philadelphia, Pennsylvania. The train had seven-cars and one locomotive. The train had just entered the Frankford Junction curve at a speed of 106 mph where the speed is restricted to 50 mph. As the train entered the curve, the engineer applied the emergency brakes. Seconds later, the locomotive and all seven passenger cars derailed. Of the 250 passengers and eight Amtrak employees that were on board, eight passengers were killed and more than 200 others were transported to area hospitals. Damage is estimated by Amtrak in excess of $9.2 million. The weather at the time of the accident was reported to be 82˚F with a westerly wind of 20 mph, with clear skies, and good visibility.

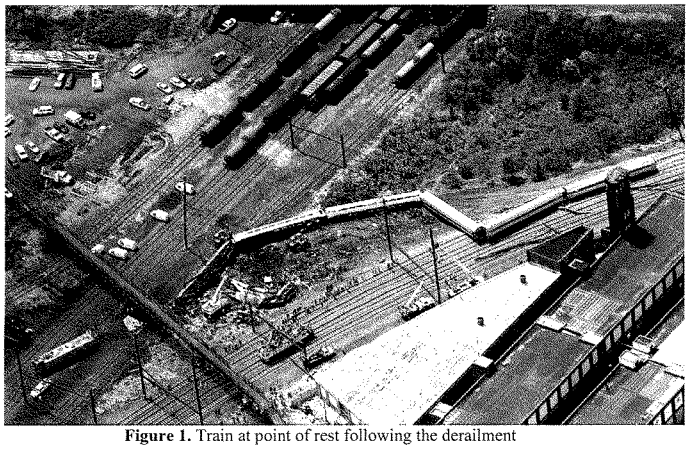


Figure 1. Train at point of rest following the derailment

The damaged cars and locomotive were transported to Amtrak facilities in Delaware for further examination.



Figure 2. Two passenger cars on their side and the remains of a damaged passenger car

Investigators have examined the train braking systems, signals, and track geometry. Thus far, no anomalies have been noted.

Based on the NTSB's preliminary review of the train's event recorder data, the train was travelling at 106 mph before the emergency brake system engaged. The data indicated that the engineer activated the emergency brakes seconds before the derailment.

The NTSB has possession of the Amtrak engineer's cell phone and has obtained the cell phone records. NTSB forensic experts are examining the phone and phone records. Although the records appear to indicate that calls were made, text messages sent, and data used on the day of the accident, investigators have not yet made a determination if there was any phone activity during the time the train was being operated. Investigators are in the process of correlating the time stamps in the engineer's cell phone records with multiple data sources including the locomotive event recorder, the locomotive outward facing video, recorded radio communications, and surveillance video.

The NTSB is investigating reports of vandals throwing rocks or other objects at passing trains around the time of the derailment. Damage to locomotive windshields and to at least one passenger car has been reported. The Amtrak 188 locomotive windshield has impact damage, however, it has not been determined if the damage was from a thrown object or as a result of the derailment. The NTSB was assisted by the FBI in evaluating the damage to the locomotive windshield which found no evidence of damage that could have been caused by a firearm.

The parties to the investigation include the Federal Railroad Administration, National Railroad Passenger Corporation (Amtrak); Philadelphia Police Department; Philadelphia Office of Emergency Services; Philadelphia Fire Department; Brotherhood of Locomotive Engineers and Trainmen; International Association of Sheet Metal, Air, Rail and Transportation Workers; and the Brotherhood of Maintenance of Way Employees.

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