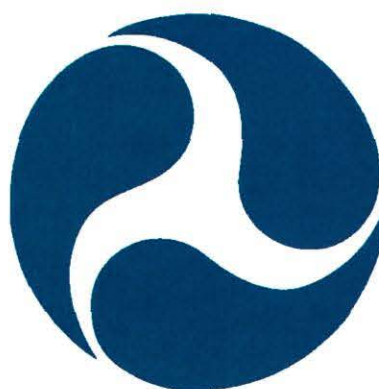


Federal Railroad Administration



**Northeast Illinois Regional Commuter Railroad Corporation
(Metra)
Focused Safety Assessment**

September 2014

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Executive Summary

The Federal Railroad Administration (FRA) conducted an intensive, focused safety assessment of the Northeast Illinois Regional Commuter Railroad Corporation (Metra) after three serious incidents occurred between May 27, 2014, and June 3, 2014. FRA's proactive response was intended to identify discrete and systemic risks so that corrective actions could be taken before a more significant incident occurred with potentially greater consequences.

Between May 27, 2014, and June 3, 2014, three serious safety incidents occurred that resulted in the decertification of three Metra locomotive engineers. Two of the incidents involved engineers who were exceeding the maximum authorized speed, and one incident involved an engineer who operated a train past a stop signal. A brief description of each occurrence follows:

- **May 27, 2014:** Metra Rock Island District Train 415 exceeded a temporary speed restriction of 30 mph at Milepost 6.2 on the Joliet Subdistrict at approximately 5:24 p.m. The train entered the temporary speed restricted area at 53 mph.
- **June 2, 2014:** Metra Rock Island District Train 400 entered the 40 mph speed restricted crossover at Control Point Pershing at 6:24 a.m. The train entered the crossover at 61 mph.¹
- **June 3, 2014:** Metra Electric District Train 127 passed a fixed signal displaying a stop indication at Matteson, Illinois, at 4:30 p.m.

The FRA's Office of Railroad Safety assigned 16 technical and human factor experts, who were divided into four teams, to conduct the assessment. The FRA assessment of Metra was principally based on a review of:

- Operational testing records for 2013 and 2014.
- Testing officers' training, qualification, and competency.
- Operational testing sessions.
- Train speed compliance observations.
- Locomotive event recorders and video recordings.²
- Metra's locomotive engineer and conductor certification programs.
- Interviews with Metra employees, labor representatives, and management.
- Metra's Roadway Worker Protection (RWP) program.³

¹ A crossover is a track connection between two adjacent, but not necessarily parallel, tracks, consisting of two switches, which is intended to be used primarily for the purpose of crossing over from one track to another. 49 CFR § 218.93. Trains typically must reduce their speed to negotiate a crossover.

² An event recorder is a device designed to resist tampering that records data elements such as train speed, direction of motion, time, distance, throttle position, brake applications and operations, and cab signals (if the locomotive is so equipped) over the most recent 48 hours of operation of the electrical system of the locomotive/cab control car on the which the device is installed. See 49 CFR §§ 229.5 and 229.135.

- Metra’s hours of service records for train service employees

The FRA identified two overarching elements that, if strengthened, would enhance the safety of Metra’s rail operations:

- Stronger safety culture and increased safety redundancy measures.
- Better use of technology across railroad operations.

Within these two areas, FRA identified and prioritized specific safety concerns and actions to take and mitigate these identified risk areas. Table 1 lists the specific safety concerns and recommendations that FRA identified during the safety assessment.

Table 1. Summary of FRA’s Findings and Recommended Actions

FRA Findings	FRA Recommended Actions
Conductors experienced conflicts between safety-sensitive duties and other responsibilities	Prioritize safety over collecting fares, on-time performance, and customer service.
Safety-related communication between engineers and conductors is inconsistent	Review opportunities for heightened crew interactions during high-risk operations, where practicable, to provide safety redundancy.
Reporting rules infractions from operating districts was slow and lacked enough detail for headquarters (HQ) certification groups to take timely and appropriate action	Establish new procedures to strengthen the flow of information between districts and Metra HQ to improve oversight and retraining of employees after rules infractions.

³ A roadway worker is any employee of a railroad or a contractor to a railroad whose duties include repair and maintenance, with the potential to foul a track. See 49 CFR § 214.7.

Metra cannot remotely download event recorder data	Add technical skills training for managers, such as event recorder analysis; conducting a minimum number of event recorder reviews for each locomotive engineer; and purchasing software/hardware to allow for remote downloading of event recorder data by supervisory personnel to use as a regular component of safety oversight.
Protections for certain high-risk crossover movements are needed	Add safety measures and procedures that would provide a level of safety redundancy to protect crossover movements at locations where there is a reduction in the maximum authorized speed of greater than 20 mph to enhance safety at Metra.
Metra needs a system in place to identify the root causes and early indicators of risk to railroad operations	Implement a Confidential Close Call Reporting System (C ³ RS) to improve safety culture, enhance open and honest communications, and reduce risk.
The recent incidents would have been prevented if Positive Train Control (PTC) was installed and properly functioning	Immediately prioritize the acquisition, testing, and installation of PTC on their property.

Conclusion

The FRA finds Metra generally compliant with Federal regulations; however, FRA believes that continuous safety improvement should be the goal of every rail property. The FRA also identified other concerns that affect safety at Metra, including: Metra’s safety culture and communications, conflicts between safety-sensitive duties and other responsibilities, reporting rules infractions, remotely downloading event recorder data, and protections for crossover movements. FRA recommends that Metra address these concerns. Although they are not violations of existing Federal regulations, many issues identified in this assessment negatively impact safety and may result in future FRA actions.

During the course of FRA’s safety assessment, FRA determined that had PTC been implemented on Metra, the three incidents that led FRA to initiate this safety assessment would have been prevented. Metra has been working to implement PTC to meet the December 31, 2015, deadline. FRA understands that Metra has encountered challenges in meeting the required date; however, FRA encourages Metra to do all it can to implement PTC as quickly as possible. The sooner PTC is implemented, the sooner Metra will realize the safety benefits that can prevent similar incidents from occurring.

The FRA also believes that Metra could benefit from a close call program, such as the Confidential Close Call Reporting System (C³RS). These types of programs can help identify

the root causes and early indicators of risk to railroad operations. A C³RS program established at Metra may provide the insight required to make incidents such as these less likely to occur.

1. Introduction

Metra is one of the largest commuter railroads in the Nation, with an annual ridership of approximately 81 million people. Metra is an operating subsidiary of the Illinois Regional Transportation Authority (RTA).

Metra owns and operates four lines, has track usage rights or lease agreements to operate Metra trains over freight railroads on three lines, and has purchase of service agreements with two freight railroads that operate commuter service on four Metra lines.

Metra's primary business is to serve people traveling to work in downtown Chicago. Metra carries about half of all work trips made from the suburbs to downtown Chicago.

During an 8-day period in 2014, three incidents occurred on Metra that resulted in the decertification of three Metra locomotive engineers. Fortunately, none of these incidents resulted in a derailment or accident, but each had the potential to cause significant damage or injuries. Details about the incidents are as follows:

- On May 27, 2014, after departing LaSalle Street Station in Chicago, Train 415 exceeded a 30-mph speed restriction on the Rock Island District. The engineer did not apply the train's brakes in time to comply with the speed restriction. The conductor and assistant conductor were collecting fares from the passengers. The train entered the speed restriction at a recorded speed of 53 mph. No Metra employees or passengers reported injuries related to this incident, and there was no reported damage to equipment.
- On June 2, 2014, Metra Rock Island District Train 400 departed the station in Joliet, Illinois, on the Rock Island District. As the train approached a crossover switch from Main Track #1 to Main Track #2, the engineer misinterpreted the signal, thinking he would remain on Main Track #1, which could sustain the train's 79 mph speed. Instead, the signal indicated the switch was lined for the train to operate through the crossover from Main Track #1 to Main Track #2, with a speed limitation of 40 mph. Just prior to the switch, the engineer began to slow down, but still entered the 40-mph crossover at 61 mph. One Metra employee reported an injury related to this incident, but no passengers reported injuries, and there was no reported damage to equipment.
- On June 3, 2014, Metra Electric District Train 127 departed heading south from the Millennium Station in Chicago on the Metra Electric District. The train was delayed about 20 minutes en route. After stopping at the station in Matteson, Illinois, to allow for disembarking and boarding passengers, the engineer proceeded south from the station and passed a stop signal. The engineer then stopped the train upon seeing that the switch was not lined for his intended route. No Metra employees or passengers reported injuries related to this incident, and there was no reported damage to equipment.

Following the third incident, FRA notified Metra of its concern about these incidents and the agency's intention to initiate this focused safety assessment.

3. Metra Operational Safety Assessment

Each of the four teams involved in FRA's safety assessment reviewed Metra's relevant records, documents, plans, and procedures. The teams conducted inspections on all of Metra's operating districts, and on the Union Pacific Railroad and BNSF Railway purchase-of-service agreement lines. The teams rode trains, observed train crews and roadway workers, and conducted more than 30 interviews with Metra labor and management employees. Team members reviewed and analyzed engineer and conductor training syllabi, the training and qualification of testing officers, and the operational testing of train crews.

The four teams were divided as follows:

- Roadway Worker Protection
- Efficiency Testing Programs
- Engineer Certification and Training
- Conductor Certification and Training

The FRA routinely inspects Metra for compliance with Metra's operating and safety rules as well as Federal laws, regulations, and orders. This safety assessment went beyond standard inspections to focus on engineer and conductor competency and communication, as well as cooperation between crewmembers. It also assessed management's role in ensuring safe operations.

4. Safety Concerns and Recommendations

4.1. Safety Assessment Findings and Recommendations

4.1.1. Prioritizing Safety

Findings: Interviews indicated that Metra places an emphasis on fare collection and on-time performance, which can distract employees from placing safety-related duties as their first priority. Additionally, Metra's GPS Center calls conductors during trips to inquire about service delays. As indicated in interviews, these calls often distract conductors from safety-sensitive duties, such as communications with the engineer.

Recommendations: Metra should make certain that managers reinforce that safety is the first priority over collecting fares and on-time performance. FRA notes that Metra has a new curriculum for training its managers, the Metra Pro Supervisor Training Program. The program focuses on leadership, communication, and conflict resolution skills. FRA recommends Metra implement this program immediately, and emphasize through the program that managers must communicate the importance of safety as the first priority and that engineers and conductors have the latitude to perform non-safety related duties when there is no conflict with the safe operation of the train.

For example, FRA recommends that Metra institute protocols to prohibit the GPS Center from calling the conductor during the trip. Instead, the GPS Center should acquire delay information more safely by contacting the assistant conductor, who is not directly responsible for communicating safety-sensitive information with the engineer.

4.1.2. Communications between Engineers and Conductors

Findings: The safety-related communication between engineers and conductors required under Metra's operating rules is inconsistent. Specifically, interviews with Metra employees indicated that conductors often do not remind engineers of speed restrictions and track authorities that are listed in their bulletins. These interviews also indicated that engineers often fail to inform conductors as trains approach signals "less favorable than clear." This lack of communication generates an unnecessary level of risk.

Additionally, FRA's analysis of the June 3, 2014, incident revealed that the engineer stopped in close proximity to the signal and then subsequently initiated movement, without observing the signal. FRA's investigation revealed that the engineer inappropriately initiated movement in reaction to the conductor closing the doors of the train. As a consequence, the engineer failed to stop the train prior to passing the stop signal. This incident might have been prevented if the conductor inquired as to the indication of the signal prior to closing the doors. The conductor's safety-sensitive duties must take priority over other duties, such as collecting fares and communicating outside the train, that could cause a distraction and potentially interfere with the safe operation of the train. See Section 4.1.3 for more discussion on prioritizing safety.

Recommendations: Metra field managers should aggressively monitor compliance with rules regarding safety-related communications and ensure the train's crew has the latitude to make the safe operation of the train the highest priority. Metra should also attempt to identify the underlying causes for inconsistent safety-related communication.

The FRA also recommends that Metra adopt a rule requiring the conductor to contact the engineer at stations where the engineer stops the train in close proximity to a signal, to ascertain the signal indication prior to closing the train doors. To facilitate this procedure, Metra should provide a list of stations with "close proximity" signals to the train crews.

4.1.3. Sharing Information between Operating Districts and Metra HQ

Findings: The lack of timely and detailed reporting of rules infractions from the operating districts to Metra HQ inhibits the railroad's ability to effectively implement corrective action. The engineers involved in the events of May 27, 2014, and June 2, 2014, had safety-related incidents in the months prior that should have triggered additional oversight and testing by Metra. The relevant operating districts did not convey this information to the Metra HQ Training and Certification Department in a clear, detailed, and timely manner. If the Metra HQ Training and Certification Department had known of these incidents, it could have taken remedial actions before the decertification events occurred.

Recommendations: Metra should strengthen its channels of communications involving employee rules infractions. This would enable the railroad to improve oversight and retraining of employees after rules infractions. FRA recommends that Metra consider adopting new communication protocols that require all safety-related operational incidents and failed tests be immediately forwarded from the districts to the Metra HQ Training and Certification Department for action. Once analyzed, this information should be forwarded as lessons learned to all operating districts.

4.1.4. Use of Event Recorder Data to Monitor Locomotive Engineers' Performance

Findings: Metra operates more than 121,636 trains per year, excluding purchase of service operations, but only reviewed event recorder data 85 times in 2013. This represents just .07% of available data, which is a very low review rate within the railroad industry. This review is made more challenging for Metra to perform as it does not have the ability to remotely download event recorder data from trains in order to analyze an engineer's performance. Additionally, some Metra managers do not have the knowledge required to review and analyze event recorder data. Most major railroads have this ability, which provides greater oversight of train handling skills and compliance. If Metra managers effectively reviewed more event recorder data, management could more readily identify and address safety performance shortcomings.

Recommendations: Metra should increase the amount of event recorder data its managers review. FRA recommends that Metra take the following steps:

1. Add technical skills training for managers, including training on how to review and analyze event recorder data.
2. Conduct a minimum number of annual event recorder reviews for each locomotive engineer using technology and processes currently in place.
3. Purchase currently available software/hardware to remotely download and analyze event recorder data. This would allow Metra to analyze event recorder data more efficiently and use it as a regular component of its safety oversight program.

4.1.5. High-Risk Crossover Movements Requiring Significant Reduction in Speed

Findings: At multiple locations across the Metra rail system, a train performing a "crossover" move from one track to another has only one advanced signal denoting the intended movement prior to the absolute signal governing movement through the crossover. If the engineer fails to identify the advanced signal, the train may enter the crossover at excessive speed. This occurred on June 2, 2014, when the engineer operated his train at 61 mph through a 40 mph crossover. When movement through a crossover requires a significant reduction in speed (*e.g.*, greater than 20 mph), exceeding that speed has safety implications which include: the potential for derailment, injuries to passengers and the crew, and damage to equipment.

Recommendations: Metra should institute additional protections where there is a movement through a crossover that requires a speed reduction of greater than 20 mph. For instance, Metra could:

1. Establish a “two-signal warning approach” for these types of crossover movements.
2. When practicable, dispatchers should notify crews when they will encounter a significant speed reduction.
3. Conduct training to increase the level of engagement and communication between conductors and engineers.
4. Advance installation of PTC.

The FRA recognizes that the implementation of PTC technology will largely alleviate the potential for overspeed movements through a crossover. However, until Metra implements PTC, the above recommendations or another effective alternative will provide an additional layer of safety.

4.1.6. Positive Train Control Installation

Findings: Positive Train Control (PTC) systems are integrated command, control, communications, and information systems for controlling train movements with safety, security, precision, and efficiency. PTC refers to communication-based/processor-based train control technology designed to prevent train-to-train collisions, overspeed derailments, incursions into established work zone limits, and the movement of a train through a main line switch in the improper position. The three recent Metra incidents involved two cases of excess speed and one case of passing a signal displaying stop. Based upon the circumstances of the three incidents, FRA determined that if PTC had been installed and properly functioning on Metra, these incidents would have been prevented.

Recommendation: Metra should immediately prioritize the acquisition, testing, and installation of PTC on its property.

4.1.7. Confidential Close Call Reporting System Implementation on Metra Property

Findings: Metra does not currently have a system in place that would allow for employees to confidentially identify safety issues that require corrective action. This type of system would help enhance the safety of rail operations. The railroad is also not currently equipped to capture this data in order to analyze trends and continuously improve the safety of their operations. A Confidential Close Call Reporting System (C³RS) serves to both capture data, as well as provide railroad carriers and FRA with opportunities to identify safety issues prior to the occurrence of more serious infractions.

Recommendations: FRA recommends implementing C³RS,⁴ which improves safety culture by encouraging open and honest communication among all participants. Importantly, C³RS allows for the identification of risks before an accident occurs, rather than determining the cause after an

⁴ C³RS is an FRA-sponsored voluntary confidential program allowing railroad carriers and their employees to report safety infractions, which are then analyzed in order to determine root cause and implement preventative actions in the future.

accident. For more information, see Appendix A, FRA's Vision for the Next Generation of Rail Safety.

4.2. Regulatory Findings and Recommendations

4.2.1. Part 214 – Railroad Workplace Safety

Findings: The assessment team reviewed Metra's response to FRA's safety recommendations issued in 2013 following a roadway worker fatality that occurred on the railroad. Specifically, in 2013, FRA discovered several deficiencies in Metra's RWP program, after a Metra roadway worker was struck and killed by a train passing on an adjacent track. Based on the information gathered in 2013, FRA recommended improvements to Metra's job briefings, training program, and personnel accountability procedures. The purpose of this current assessment was to evaluate Metra's implementation of FRA's recommendations, specifically to assess new RWP procedures and their implementation.

The FRA reviewed the program of instruction, on-the-job training, and qualification and examination and found that Metra had implemented FRA's recommendations. FRA found that Metra's RWP program (see Title 49 Code of Federal Regulations (CFR) part 214, subpart C) and Metra's implementation of the program complied with Federal regulations.

Recommendation: FRA recommends that Metra continue to implement the current RWP program in accordance with Federal regulations.

4.2.2. Part 217 – Railroad Operating Rules

Findings: FRA's assessment of Metra's "operating rules" and program of "operational tests and inspections" (see 49 CFR Section 217.9) determined that the program complies with Federal regulations. FRA found that testing managers were properly instructed and trained on the program. Additionally, FRA determined that Metra satisfactorily adjusts its testing requirements based on accident/incident data in accordance with the regulation, previous test results, and other pertinent safety data.

The FRA also reviewed the results of Metra's annual rules examinations for engineers and conductors. It noted inconsistent scoring practices on some answer sheets. Specifically, unanswered questions were not scored as incorrect, causing the final grade to be inaccurately calculated. Some engineers and conductors may therefore fail to meet the minimum standard required to pass their annual examinations, but nonetheless be given a passing score. This may cause an engineer or conductor to improperly apply rules, potentially leading to an accident or incident.

Recommendations: FRA recommends that Metra conduct an internal audit of the results of all rules' examinations conducted in 2013 and 2014 to identify and correct any scoring

inconsistencies. Metra should also develop a grading process that more accurately reflects the results of all examinations and provide the results of this audit to FRA.

4.2.3. Part 240 – Qualification and Certification of Locomotive Engineers

Findings: FRA’s assessment of Metra’s program for the qualification and certification of locomotive engineers (see 49 CFR part 240) determined that the program fails to indicate what Metra considers a “sufficient distance” and “reasonable length of time” for the skills and annual monitoring ride.⁵ The program also lacks the requirement for designated supervisors of locomotive engineers (DSLE) to have knowledge of part 240.⁶

The FRA also reviewed Metra’s program of instruction, on-the-job training, and examination for engineers. Metra’s program is sufficiently challenging, situational based, and ensures that engineers have the skills necessary to safely operate passenger trains. Metra meets engineer certification recordkeeping requirements; however, minor defects were noted in the records of several individual engineers.

Recommendations: FRA recommends that Metra update its engineer qualification and certification program to indicate what Metra considers a “sufficient distance” and “reasonable length of time” for the skills and annual monitoring rides conducted by the DSLEs. Metra should also add the requirement for DSLEs to have knowledge of part 240. Metra should provide the DSLEs with formal training on part 240 to ensure that this requirement is met.

The FRA recommends that Metra develop a curriculum for any managers whose duties require them to analyze event recorders that would focus on knowledge of regulatory requirements and the technical skills necessary to monitor the performance of locomotive engineers. (Several railroads have this type of formal training programs for managers and find it beneficial.) FRA further recommends that Metra require its prospective mentor engineers to meet minimum tenure requirements and receive adequate instruction on mentoring engineer trainees under their supervision.

4.2.4. Part 242 – Qualification and Certification of Conductors

Findings: FRA’s assessment of Metra’s qualification and certification of conductors (see 49 CFR part 242) determined that the program complies with Federal regulations. Metra’s program is challenging, situational based, and provides conductors with the skills necessary to ensure the safe operation of passenger trains. Conductor certification recordkeeping is organized and detailed.

Recommendation: Although Metra’s conductor certification and recordkeeping complies with Federal regulations, FRA believes that Metra should further enhance their program by requiring

⁵ See 49 CFR §§ 240.127 and 240.129.

⁶ See 49 CFR § 240.105(a) and (b).

its prospective mentor conductors to meet minimum tenure requirements and receive adequate instruction on mentoring conductor trainees under their supervision.

5. Post-Assessment Actions

The FRA will continue to monitor Metra's compliance with Federal regulations. In response to FRA's recommendations, Metra is asked to report back to FRA within 30 days to outline what actions have been taken to adopt FRA's recommendations.

6. Conclusion

The FRA finds Metra generally compliant with Federal regulations; however, FRA believes that continuous safety improvement should be the goal of every rail property. The FRA also identified other concerns that affect safety at Metra, including: Metra's safety culture and communications, conflicts between safety-sensitive duties and other responsibilities, reporting rules infractions, remotely downloading event recorder data, and protections for crossover movements. FRA recommends that Metra address these concerns. Although they are not violations of existing Federal regulations, many issues identified in this assessment negatively impact safety and may result in future FRA actions.

During the course of FRA's safety assessment, FRA determined that had PTC been implemented on Metra, the three incidents that led FRA to initiate this safety assessment would have been prevented. Metra has been working to implement PTC to meet the December 31, 2015, deadline. FRA understands that Metra has encountered challenges in meeting the required date; however, FRA encourages Metra to do all it can to implement PTC as quickly as possible. The sooner PTC is implemented, the sooner Metra will realize the safety benefits that can prevent similar incidents from occurring.

The FRA also believes that Metra could benefit from a close call program, such as C³RS. These types of programs can help identify the root causes and early indicators of risk to railroad operations. A C³RS program established at Metra may provide the insight required to make incidents such as these less likely to occur.

Appendix A. FRA's Vision for the Next Generation of Rail Safety

Continuous safety improvement requires a comprehensive strategy designed to mitigate risk. FRA's strategy is founded on three pillars:

- Continuing a rigorous oversight and inspection program based on strategic use of data.
- Advancing proactive approaches for early identification and mitigation of risk.
- Capital investments and robust research and development.

Pillar I. Continuing a Rigorous Oversight and Inspection Program

FRA's approach to rail safety has led to unprecedented safety improvements. We will continue this framework for safety oversight and enforcement and work to improve upon it. The Staffing Allocation Plan and National Inspection Plan will continue to be key tools for workforce planning and inspection activities.

The FRA's oversight program improves safety by developing and enforcing rules based on facts, incident and accident causation analysis, comparison of alternative mitigation measures, and cost-beneficial solutions. FRA rulemaking considers current and future industry capabilities, compliance burden and cost.

State rail inspectors are a force multiplier for FRA's compliance and enforcement efforts. The State Rail Safety Participation Program consists of States' deploying safety inspectors in the five rail safety inspection disciplines. State programs complement FRA's compliance inspections. The FRA provides training to State inspectors and encourages more State participation in this important program.

Focus Areas

Rail safety has improved overall. However, nationwide, accidents caused by human error and track defects account for more than two-thirds of all train accidents, and trespassing and highway-rail grade crossing incidents account for approximately 95 percent of all rail-related fatalities. The FRA will allocate resources and work with our partners, such as Operation Lifesaver, to make improvements in these challenging areas.

Human Factors

- The FRA issued a series of implementing regulations to advance nationwide implementation of Positive Train Control (PTC) systems (which prevent overspeed derailments, train-to-train collisions, and other types of accidents often caused by human error).
- The FRA issued a final rule requiring a railroad to have a formal program for certifying train conductors. This will raise the bar of professionalism and ensure that only those individuals who meet minimum Federal safety standards serve as conductors.
- The FRA issued a final rule on the hours of service of passenger train employees.

- The FRA led an industry-wide initiative to combat the dangers of electronic device distraction in the railroad workplace and issued a final rule prohibiting distracted operation of trains.

Track Safety

- The FRA issued a final rule to improve rail inspections. This rule requires the use of performance-based rail inspection methods that focus on maintaining low rail failure rates per mile of track.
- The FRA issued a final rule on Vehicle/Track Interaction Safety Standards.
- The FRA developed new technology for avoiding track buckles (sun kinks) and to predict rail temperature variations.

Grade Crossing Safety and Trespass Prevention

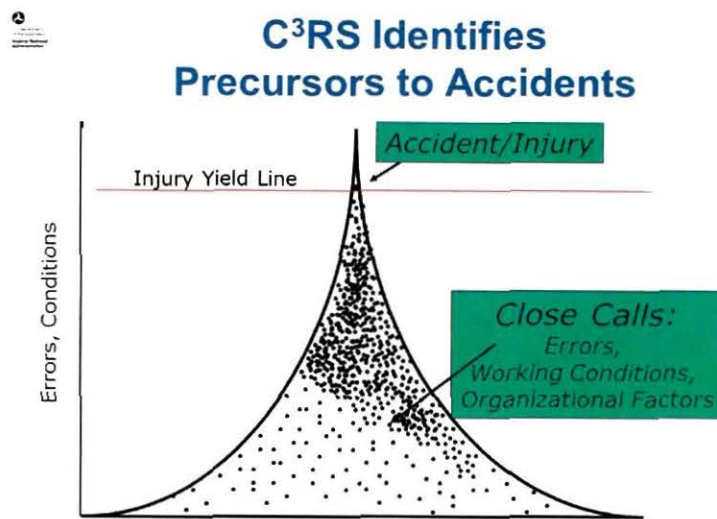
- The FRA issued standards requiring railroads to establish and maintain toll-free “1-800” emergency notification systems through which the public can telephone the proper railroad about a stalled vehicle or other safety problem at a specifically identified grade crossing.
- The FRA issued regulations requiring 10 States to issue State-specific action plans to improve safety at highway-rail grade crossings.
- The FRA developed model State laws regarding highway users’ sight distance at passively signed crossings and highway motorists’ violations of grade crossing warning devices.
- The FRA will issue a proposed rule specifying the types of information that railroads must report to the Department’s National Crossing Inventory.
- FRA has released a smartphone application with grade crossing information.

Pillar II. Advancing Proactive Approaches to Reduce Risk

Continuous safety improvement requires a multi-faceted approach. The next level of safety will come from advancing pro-active safety-based programs that analyze risks, identify hazards, and put in place customized plans to eliminate those risks. These include:

- Risk Reduction Programs (RRP) and System Safety Programs (SSP) that help identify accident precursors so that preventive corrective action can be taken. We will issue a final rule before the end of 2014 to require passenger railroads to develop and implement SSPs. A notice of proposed rulemaking that would require freight railroads to establish RRP is currently under development. Both are designed to require railroads to develop and implement systematic risk-based approaches to ensuring continuous safety improvement.
- Confidential Close Call Reporting System (C³RS) is a voluntary and non-punitive program for railroads and their employees to report close calls. One C³RS pilot site resulted in a nearly 70 percent reduction in certain accidents. C³RS helps develop a positive and proactive safety culture, using detailed data far beyond what is obtained during accident investigations. The amount of information provided from proactive

programs like C³RS in comparison to traditional data from accidents and injuries collected after the fact is illustrated below:



Programs like Confidential Close Calls Reporting allow us to gather data *before* an accident occurs and to develop risk mitigation strategies well in advance.

Pillar III. Investing in Rail Infrastructure and Robust Research and Development

Parts of two important rail laws expired at the end of FY 2013: RSIA and the Passenger Rail Investment and Improvement Act of 2008 (PRIIA). In May 2014, the Administration sent Congress a multi-year surface reauthorization proposal: The GROW AMERICA Act. The Act laid out a comprehensive, multi-year reauthorization blueprint for moving forward and invests \$19 billion—over 4 years—to improve rail safety and invest in a national high-performance rail system. The Act provides predictable, dedicated funding that provides the certainty for States and local communities to make the transportation investments necessary to improve our infrastructure and support economic growth. The Act also builds on current investments to improve the rail system in areas ranging from Positive Train Control implementation to enhancing flexibility in financing programs.

New Programs⁷

Establishes New Amtrak Grants: Over many years, existing capital and operating programs have focused on maintaining the legacy rail system on an annual basis. The **GROW AMERICA Act** will establish the Current Passenger Rail Service grant program to provide a longer-term view toward ensuring existing passenger rail assets and services are maintained in good, working condition. The grants will be oriented around Amtrak’s main business lines,

⁷ http://www.fra.dot.gov/eLib/details/L05224#p1_z10_gD_lPF

including the Northeast Corridor, State Corridors, Long-Distance Routes, and National Assets. (Section 9102)

Establishes Rail Service Improvement Program: Ridership on passenger rail is at an all-time high—last year a record 31.6 million passengers travelled on Amtrak. As the Nation’s population is set grow by 100 million people by the year 2050, getting to a destination safely and without delay will become all the more critical. The **GROW AMERICA Act** will establish the Rail Service Improvement Program, which will provide competitive grants to drive development of high-performing passenger rail networks. This will include funding for the implementation of PTC—technology designed to stop trains to avert collisions—for commuter railroads, support for the mitigation of adverse impacts associated with rail operations in local communities, upgrades for shortline freight operations, and local and regional planning efforts. (Section 9102)

Forges New Partnerships through Regional Rail Development Authorities (RRDA): The Nation requires seamless, intermodal transportation networks in order to move people and goods efficiently and effectively—and achieving that goal requires improved transportation-related coordination among Federal, State, and local entities. To achieve these goals, the **GROW AMERICA Act** will authorize DOT to establish RRDA in consultation with State governors. RRDA will have the power to plan for and undertake regional corridor development activities and be an eligible recipient of certain grants. (Section 9201)

Changes to Existing Programs

Enhances the RRIF Program: The RRIF program makes financing available to acquire, improve, rehabilitate intermodal or rail equipment or facilities, refinance outstanding debt, or develop or establish new intermodal or railroad facilities. In an effort to make Railroad Rehabilitation and Improvement Financing (RRIF) more accessible to regional and shortline railroads, the **GROW AMERICA Act** enhances the program by allowing FRA to subsidize some of the costs of these loans to borrowers. (Section 1403)

Revamps Amtrak Business and Capital Planning: In addition to restructuring Amtrak funding around lines of business, the **GROW AMERICA Act** requires Amtrak to engage in annual 5-year operating and capital planning to focus on the long-term needs of its business lines. These plans will be developed with close FRA coordination, and will directly inform annual budget requests. Capital asset plans will describe investment priorities and implementation strategies and identify specific projects to address the backlog of state-of-good-repair needs, recapitalization/ongoing maintenance needs, upgrades to support service enhancements, and business initiatives with a defined return on investment. (Section 9103)

Advances Safety Research: Building on previous successes in safety risk reduction and improved safety culture, the **GROW AMERICA Act** authorizes additional funding for research and development projects. The funds will also be used to increase the domestic content of new rail vehicles and allow their safety performance to be tested at FRA’s facility. The funds will also expand research programs at universities, which will help address the urgent industry-wide need for qualified railroad professionals. (Section 9105)

Strengthens National, Regional, and State Plans: The **GROW AMERICA Act** further defines and provides requirements for a National Rail Development Plan and Regional Rail Development Plans. These plans are necessary to provide a long-range blueprint for proceeding with passenger and freight rail investments in a market-based, cost-effective manner. In addition, the **Act** revises the state rail plan requirements from previous legislation. (Sections 9301, 9302)

Implements Positive Train Control: To fully implement PTC, the backbone of the next generation of rail safety, the **GROW AMERICA Act** establishes clear milestones for PTC implementation, allows for the discretion to provide extensions beyond the current statutory implementation deadline of December 31, 2015, and assists publicly-funded commuter rail agencies to implement PTC systems, by providing \$2.3 billion over 4 years for commuter railroads to support integration. (Section 9402)

Reforms Hours of Service Rules and Mitigates Noise Emissions: To improve the predictability of work schedules for railroad operating employees and prevent operator fatigue, the **GROW AMERICA Act** grants FRA full rulemaking authority to replace outdated hours of service laws with scientifically-based regulations. (Section 9403) Further, the **Act** grants FRA the authority to regulate noise emissions, currently a patchwork of incompatible standards, in conjunction with the Environmental Protection Agency. (Section 9407)