COVINGTON

BEIJING BOSTON BRUSSELS DUBAI FRANKFURT
JOHANNESBURG LONDON LOS ANGELES NEW YORK
PALO ALTO SAN FRANCISCO SEOUL SHANGHAI WASHINGTON

Michael L. Rosenthal

Covington & Burling LLP
One CityCenter
850 Tenth Street, NW
Washington, DC 20001-4956
T +1 202 662 5448
mrosenthal@cov.com

Via Electronic Mail

April 30, 2026

Ms. Danielle Gosselin
Director, Office of Environmental Analysis
Surface Transportation Board
395 E Street SW
Washington, DC 20423
Danielle.Gosselin@stb.gov

Re: Docket No. FD 36873, *Union Pacific Corporation and Union Pacific Railroad Company – Control – Norfolk Southern Corporation and Norfolk Southern Railway Company*

Dear Director Gosselin:

On behalf of Union Pacific (UP) and Norfolk Southern (NS), together with their respective holding companies Union Pacific Corporation (UPC) and Norfolk Southern Corporation (NSC) (collectively, Applicants), and in accordance with 49 C.F.R. §§ 1106.4 and 1180.8(a)(1), enclosed please find Applicants' proposed Safety Integration Plan. This Plan has been prepared in consultation with the Federal Railroad Administration.

Applicants originally submitted their Safety Integration Plan to the Office of Environmental Analysis on December 19, which accompanied their Railroad Control Application filed on the same date. Pursuant to the Surface Transportation Board's Decision No. 9, Applicants submitted an Amended Railroad Control Application on April 30. Accordingly, Applicants are submitting a proposed Safety Integration Plan.

In accordance with 49 C.F.R. § 244.17, Applicants have filed an original copy of the proposed Safety Integration Plan with the Associate Administrator for Safety of the Federal Railroad Administration by mail.

Please contact me with any questions.

Respectfully submitted,

/s/ Michael L. Rosenthal
Michael L. Rosenthal

Attorney for Union Pacific Corporation and Union Pacific Railroad Company

Enclosure Proposed Safety Integration Plan

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. FD 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY
—CONTROL—
NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN
RAILWAY COMPANY

SAFETY INTEGRATION PLAN

RAYMOND A. ATKINS
CARRIE C. MAHAN
MATTHEW J. WARREN
ALLISON C. DAVIS
MARC A. KORMAN
Sidley Austin LLP
1501 K Street, NW
Washington, DC 20005
(202) 736-8000

JASON M. MORRIS
JOSEPH H. CARPENTER IV
THOMAS E. ZOELLER
HANNA M. CHOUEST
T. MATTHEW LOCKHART
Norfolk Southern Railway Company
650 W. Peachtree Street NW
Atlanta, GA 30308

Attorneys for Norfolk Southern Corporation and Norfolk Southern Railway Company

MICHAEL L. ROSENTHAL
DEREK LUDWIN
SARAH L. WILSON
AUSTIN SCHLICK
MATTHEW J. GLOVER
JOSHUA GONZÁLEZ
MOLLY BROWN
Covington & Burling LLP
One CityCenter
850 Tenth Street, NW
Washington, DC 20001
(202) 662-6000

CHRISTINA B. CONLIN
JAMES B. BOLES
TONYA W. CONLEY
TANYA L. SPRATT
Union Pacific Railroad Company
1400 Douglas Street
Omaha, NE 68179

Attorneys for Union Pacific Corporation and Union Pacific Railroad Company

April 30, 2026

Table of Contents

Index to Appendices

Table of Abbreviations

AAR	Association of American Railroads
ABD	Acoustic Bearing Detector
ABS	Automatic Block Signals
Applicants	UPC, UP, NSC, and NS
AREMA	American Railway Engineering and Maintenance-of-Way Association
ATGMS	Automated Track Geometry Measurement System
BIMS	Bridge Information Management System
BLI	Bulletin Line Item
BMP	Bridge Maintenance Planner
BSMP	Bridge Safety Management Program
C&S	Communications and Signals
C3RS	Confidential Close Call Reporting System
CADX	Computer-Aided Dispatch
CAP	Crossing Assessment Process
CBA	Collective Bargaining Agreements
CBT	Computer-Based Training
CEO	Chief Executive Officer
C.F.R.	Code of Federal Regulations
CMTS	Crew Management Timekeeping System
COMMIT	Coaching, Observation, Mentoring, and Monitoring with Integrity and Trust
CQF	Certification, Qualification, and Familiarization
CSO	Chief Safety Officer
CTC	Centralized Traffic Control
CWR	Continuous Welded Rail
DED	Dragging Equipment Detector
DER	Designated Employer Representative
DMMS	Dispatcher Manpower Management System
DOT	Department of Transportation
DRF	Disaster Recovery Facility
DSLE	Designated Supervisor of Locomotive Engineers
DSRCO	Designated Supervisor of Remote-Control Operators

EAP	Employee Assistance Program
EDI	Electronic Data Interchange
ENS	Emergency Notification System
EQMS	Employee Quality Management System
ERP	Emergency Response Plan
ESM	Engineering Structures Management
FCC	Federal Communications Commission
FRA	Federal Railroad Administration
GCOR	General Code of Operating Rules
HAZWOPER	Hazardous Waste Operations and Emergency Response
HBD	Hot Box Detector
HHFT	High Hazard Flammable Trains
HMERP	Hazardous Materials Emergency Response Plan
HMM	Hazardous Materials Management
HOS	Hours of Service
HOSS	Hours of Service System
HR	Human Resources
HWD	Hot Wheel Detector
ICS	Incident Command System
I-ETMS	Interoperable Electronic Train Management System
ILT	Instructor-Led Training
IT	Information Technology
KPI	Key Performance Indicators
LMS	Learning Management System
MRO	Medical Review Officer
MUTCD	Manual on Uniform Traffic Control Devices
NAR	Non-Accident Releases
NIMS	National Incident Management System
NOC	Network Operations Center
NORAC	Northeast Operating Rules Advisory Committee
NPREP	National Preparedness for Response Exercise Program
NS	Norfolk Southern Railway Company
NSC	Norfolk Southern Corporation
OAR	Operation Awareness & Response

OJT	On-the-Job Training
OLAV	Operation Lifesaver Authorized Volunteers
OPCC	Operating Practices Command Center
ORB/PS	Operation RedBlock/Peer Support
OSHA	Occupational Safety and Health Administration
OTS	On-Track Safety
PPE	Personal Protective Equipment
PSE	Performance Standard Engagement
PTB	Physics Train Builder
PTC	Positive Train Control
QMI	Qualified Mechanical Inspectors
RBE	Railroad Bridge Engineers
RBI	Railroad Bridge Inspectors
RCL	Remote Control Locomotive
RCO	Remote Control Operator
RCRMS	Rail Corridor Risk Management System
RFE	Road Foreman of Engines
RISC	Railroad Investigation Safety Course
RMCC	Response Management Communication Center
RMM	Rail Maintenance Machine
RRP	Risk Reduction Program
RTDCO	Rules Governing Train Dispatchers and Control Operators
RWP	Roadway Worker Protection
SERC	State Emergency Response Commissions
SERTC	Security and Emergency Response Training Center
SIP	Safety Integration Plan
SIRT	Safety Incident Response Team
SMRT	Scrap Material Recovery Team
SMS	Safety Management System
STB	Surface Transportation Board
TEY	Train, Engine, and Yard
TMA	Train Management Alerts
UDE	Undesired Emergency
UP	Union Pacific Railroad Company

UP CARES	Union Pacific Crossing Accident Reduction Education and Safety
UPC	Union Pacific Corporation
UPPD	Union Pacific Police Department
USHMI	U.S. Hazardous Materials Instructions for Rail
UTCS	Unified Train Control System
VP	Vice President

I. Introduction and Overview of the Proposed Transaction

The proposed consolidation of Union Pacific Railroad Company (UP) and Norfolk Southern Railway Company (NS)[1] is an unprecedented opportunity to grow the American economy. The union of these two railroads will create America's first true transcontinental railroad, transforming the nation's supply chain, unleashing the strength of domestic manufacturing, and enabling new job creation from coast to coast. The resulting network will integrate UP's and NS's best practices for safety, further benefitting railroad employees and shippers as well as the American public.

UP's current network spans 23 states and approximately 32,880 route miles, confined to the western two-thirds of the United States. It connects ports on the Pacific Coast and the Gulf Coast with key gateways in the Midwest and Eastern United States and provides corridors to key Mexican and Canadian gateways. *See* Figure 1, below.

[1] Pursuant to 49 U.S.C. §§ 11323–25 and 49 C.F.R. Part 1180, on April 30, 2026, UP and NS, together with their respective holding companies Union Pacific Corporation (UPC) and Norfolk Southern Corporation (NSC), (collectively, Applicants) filed with the Surface Transportation Board (STB) an Amended Application for authorization of (i) the acquisition of control by UPC of NSC, and through NSC of NS and NS's rail carrier subsidiaries, and (ii) the resulting common control by UPC of UP and NS and the consolidation of the rail operations of UP and NS.

Figure 1
Map of UP's Network

UP has eight principal routes. Three routes include UP's main line between Chicago and North Platte: these routes cover (1) Chicago-Pacific Northwest, (2) Chicago-Northern California, and (3) Chicago-Salt Lake City/Southern California. Three routes include UP's main line between Southern California and El Paso: these routes cover (4) Southern California-Kansas City/St. Louis/Chicago, (5) Southern California-Central Texas/Shreveport/Memphis, and (6) Southern California-South Texas/New Orleans. Another route runs between Mexico and Chicago: (7) Mexico/Texas-Memphis/St. Louis/Chicago. One route runs along the West Coast: (8) Pacific Northwest-Southern California.

UP has more than 300 yards and terminals across its network. UP's primary dispatching facility is the Harriman Dispatching Center in Omaha, Nebraska. Table 1 shows UP's principal classification yards and major intermodal terminals.

Table 1
UP Principal Classification Yards and Major Intermodal Terminals

UP Yards	UP Intermodal Terminals
North Little Rock, AR	Global 4 (Chicago), IL
Englewood (Houston), TX	Global 2 (Chicago), IL
Gateway Yard (St. Louis), IL	East Los Angeles, CA
Livonia, LA	Mesquite (Dallas), TX
Ft. Worth, TX	ICTF (Los Angeles), CA
North Platte East, NE	Lathrop, CA
North Platte West, NE	Marion (Memphis), AR
Roseville, CA	Port Laredo, TX
Settegast (Houston), TX	Settegast (Houston), TX
West Colton (Los Angeles), CA	
Proviso (Chicago), IL	
Council Bluffs, IA	
18th St. (Kansas City), KS	
Tucson, AZ	
Pine Bluff, AR	

NS's rail network spans approximately 19,200 route miles, connecting ports and businesses in 22 eastern states and the District of Columbia.[2] *See* Figure 2, below. NS currently offers the most extensive intermodal network in the eastern half of the United States.

[2] NS also has haulage rights and other interests relating to the Wylie Intermodal Terminal in Texas (but NS does not operate there). NS does also operate on approximately three miles of trackage rights in Kansas.

Figure 2
Map of NS's Network

Four routes form the core of NS's network. Three routes run between (1) Chicago and the Southeast (Atlanta), (2) the Southeast (Atlanta/Chattanooga) and the Northeast, and (3) the Northeast and Chicago, forming a triangle covering the eastern United States. The fourth route connects (4) Chicago and Norfolk, Virginia.

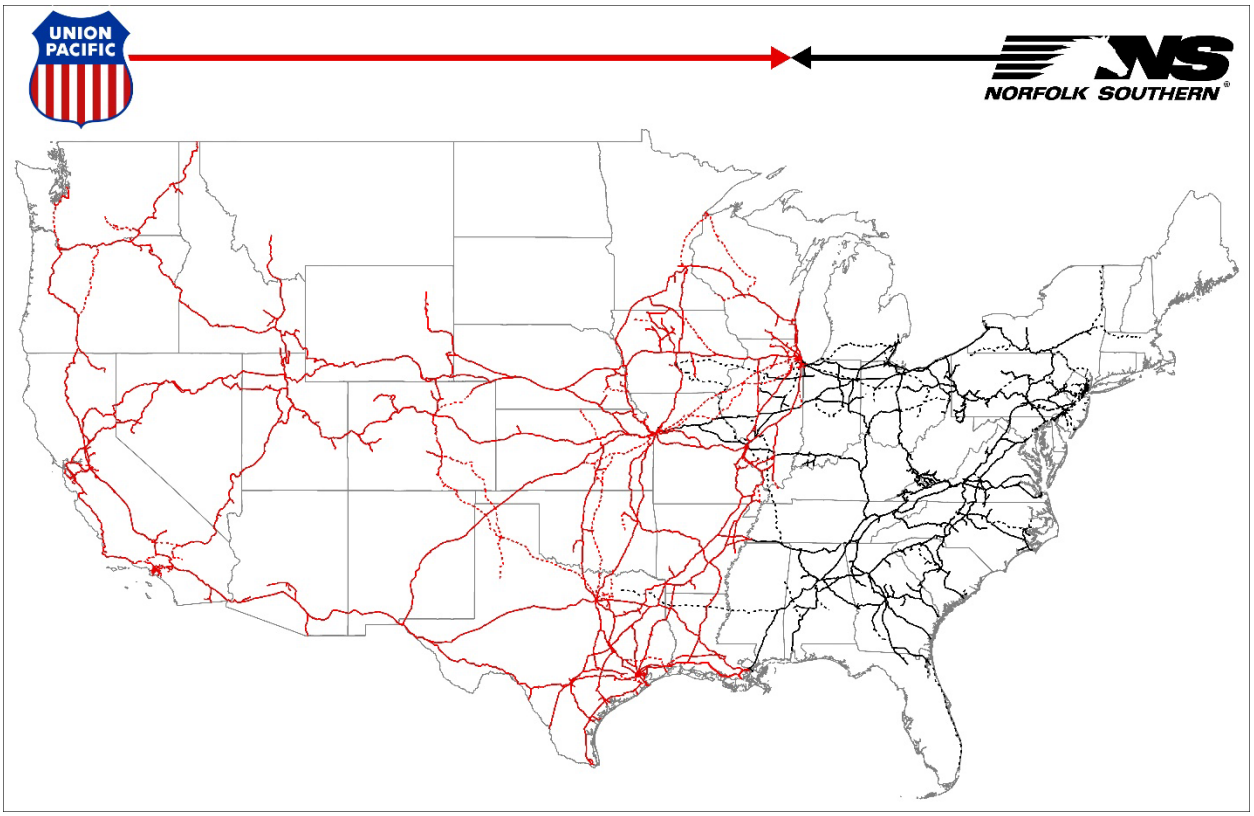
NS has more than 260 yards of various sizes across its network. Table 2 lists NS's principal classification yards and major intermodal terminals.

Table 2
NS Principal Classification Yards and Major Intermodal Terminals

NS Yards	NS Intermodal Terminals
Elkhart, IN	47th St. (Chicago), IL
Moorman (Bellevue), OH	Austell (Atlanta), GA
DeButts (Chattanooga), TN	Harrisburg, PA
Birmingham, AL	Calumet (Chicago), IL
Conway, PA	Landers (Chicago), IL
Brosnan (Macon), GA	Croxton (New York City), NJ
Decatur (Incl. East Decatur), IL	Rutherford (Harrisburg), PA
Enola (Harrisburg), PA	Rickenbacker (Columbus), OH
Sheffield, AL	Voltz (Kansas City), MO
Linwood, NC	Jacksonville, FL

As Figures 1 and 2 above show, the UP and NS networks are complementary: UP serves the western two thirds of the country, while NS serves the East Coast. Accordingly, the proposed UP/NS combination is "end-to-end." Figure 3, below, shows the proposed combined network.

Figure 3
Map of Proposed Combined UP/NS Network



The UP and NS networks meet at key gateways in the middle of the country, including Chicago, St. Louis, Memphis, and New Orleans. Applicants anticipate that consolidation will result in significant efficiency gains and synergies for traffic UP and NS currently interchange at these gateways, benefiting both customers and the railroads. For instance, Applicants expect that consolidation will allow improved service for traffic currently interchanged between UP and NS by reducing handlings and improving blocking patterns. Applicants anticipate that these improvements will immediately improve transit times for currently interchanged traffic.

Further, because the UP and NS systems are complementary and Applicants are carefully planning for the integration of the two railroads' operations, Applicants

anticipate a safe, smooth, and seamless transition to a combined system. Among other improvements, the new transcontinental railroad will benefit from the integration of UP's and NS's safety programs and cultures to make them even stronger in the cross-country operation.

Both UP and NS maintain all programs required by Title 49, subtitle B, chapter 2, of the Code of Federal Regulations (C.F.R.). As described in more detail in the sections below, both UP and NS intend, following the combination, to continue implementing their respective approved programs until such time as a comprehensive review of the programs and a detailed plan for their integration are completed, and the programs are successfully integrated. The combined railroad's integrated programs will meet regulatory standards and UP/NS will consult with the Federal Railroad Administration (FRA) as appropriate to ensure full compliance with all applicable laws and regulations.

II. Executive Summary

UP's goal is to be the safest railroad operating in the United States. Its dedication to safety is reflected in its excellent safety performance. For example, UP had the second-lowest personal injury rate among all Class I railroads in 2024, and this injury rate continued to fall in 2025. Between 2020 and 2024, UP made a total of $16.541 billion in capital investments, including in a variety of safety programs and technologies. These expenditures include investments in upgrading UP's infrastructure, modernizing locomotives and freight cars, and installing advanced safety technologies. UP will continue to maintain its safety standards and safety-improvement initiatives during and following its integration with NS.

NS similarly maintains strong operating practices that include several industry-leading safety trainings and tools. It made over $10 billion in capital investments between 2020 and 2024, including heavily enhancing its deployment of wayside detectors and other advanced technology to ensure rail equipment and tracks are in safe and working order. Because the UP/NS combination will involve two Class I railroads with mature processes, demonstrated safety performance, and limited geographic overlap, Applicants fully expect the integration will further improve the safety of all railroad operations, as well as their efficiency.

This Safety Integration Plan (SIP), developed in accordance with the regulations of the FRA and the STB, describes how UP and NS intend to implement the integration safely and in compliance with applicable safety laws and regulations. While integration planning has already begun, Applicants expect to implement the integration process deliberately and in consultation with the FRA over the three years following STB approval of UP control (the Control Date) to ensure that there will be no disruptions in safe operations or the service provided to customers.

This SIP addresses each of the subjects required to be addressed in a combination involving an amalgamation of rail operations. *See* 49 C.F.R. § 244.13. Topics include corporate culture; training; operating practices, including operating rules, alcohol and drug programs, qualification and certification of locomotive engineers, and hours of service (HOS) laws; motive power and equipment; signal and train control; track safety standards and bridge structures; hazardous materials; dispatching operations; highway-rail grade crossing systems; personnel staffing;

capital investment; and information systems compatibility. Each section of the SIP includes the requisite discussion of integration issues.

Applicants' integration planning remains underway. Appendix 1 sets forth the major workstreams, the estimated resource allocation for each, and the corresponding estimated start and completion dates for the elements of the SIP. Because the combination is "end-to-end," Applicants anticipate fewer issues than combinations where overlaps and rationalization were key rationales underlying the transaction. For these reasons, and as described further in the SIP, Applicants do not anticipate any adverse impact on safety as a result of the combination. In fact, as described in various sections of the SIP, Applicants expect that safety will improve because of investment, growth, enhanced use of technology, strengthened processes, and an even greater focus on employee engagement.

The remainder of this Executive Summary provides a brief overview of the individual sections of the SIP that follow.

Corporate Culture. UP's executive leadership team has established the goal of running the safest railroad operating in the United States. This company-wide objective sets the tone for UP's safety culture. UP holds all employees, irrespective of their position, personally responsible for helping ensure the safety of pedestrians and motorists, other UP employees, and rail equipment and cargo. UP's safety programming emphasizes that safety is not only the railroad's priority but also the personal responsibility of each UP employee. This dedication to safety is reflected in

UP's performance, including its low personal injury rate and a significant drop in the railroad's derailment incident rate since 2023.

NS's leadership team likewise places a high value on safety. At NS, safety is a core value and the lens through which the railroad views every decision. NS redoubled its focus on safety after the East Palestine, Ohio, derailment in 2023, instituting improved systems, practices, and procedures across the network. The combined network will continue both Applicants' safe operations. Applicants expect that the combined railroad's adoption of certain proven UP safety programs and appropriate best practices from NS programs will further bolster safety in its coast-to-coast system.

Training. Both UP and NS maintain robust safety training programs that satisfy regulatory requirements and further their operational goals. Applicants have already conducted a comprehensive review of both UP's and NS's training programs. These training programs have key similarities that will aid the integration process. Applicants anticipate that UP and NS will maintain their current, effective training systems until they are fully prepared to switch over to a unified training program based on the UP model, as enhanced through learnings from the NS program and other best practices. Applicants expect that integration will lead to further improvements in safety training for the combined railroad.

Operating Practices. Both UP and NS have operating practices relating to their respective operating rules, alcohol and drug testing programs, qualification and certification of locomotive engineers, and HOS laws. Applicants expect to keep these

operating practices separate for some period after the Control Date. Applicants anticipate that following the combination, UP/NS will perform a comprehensive review of all operating rules and practices to determine the best fit for the combined company, and will then submit to the FRA appropriate filings for those consolidated operating practices.

Motive Power and Equipment. Both UP and NS maintain locomotive inspection and repair facilities across their networks, and employees of both railroads who work on inspection and repair go through training and certification that complies with relevant regulations. Once operating patterns for the combined, cross-country system are established, Applicants will determine whether to make any changes to network repair and service locations. Applicants anticipate that qualification standards for legacy UP and NS mechanical and locomotive personnel will remain separate for a period following the combination, but that the combined railroad will ultimately adopt UP's qualification standards.

Signal and Train Control. Applicants anticipate that, for a period following the combination, UP/NS will continue operating with the signal and train control systems currently in place and those already scheduled to be installed. After the optimum processes, standards, and systems for the combined UP and NS are determined, Applicants expect that UP/NS will develop a plan for the safe integration of the legacy UP and NS signal and train control systems. Applicants anticipate that this plan will include milestones and checkpoints to measure progress and maintain focus on safety during integration. The plan will maintain compliance with federal

regulations and include testing prior to implementation, as well as back-up procedures to ensure a safe and seamless operation.

Track Safety Standards and Bridge Structures. Both UP and NS conduct regular, comprehensive reviews of their networks, including bridges and other structures. Applicants anticipate that following the combination, UP/NS will continue utilizing both railroads' current bridge and structure plans and track infrastructure programs while the combined railroad performs a comprehensive review. Applicants anticipate that the combined railroad will ultimately apply UP's infrastructure programs across the combined network, with improvements drawn from NS's best practices.

Hazardous Materials. Both UP and NS maintain robust hazardous materials programs. Both programs have the goal of ensuring the safe and efficient transportation of hazardous materials by reducing risk through detailed inspections and strict protocols, partnering with customers, first responders, and the regulatory communities, all while maintaining readiness to respond quickly and safely to any incident. Applicants anticipate that, following a comprehensive review of assets and programs, the combined railroad will adopt many of UP's programs, procedures, and systems, including UP's inspection program and training programs. Applicants also expect that the combined railroad will incorporate the legacy NS emergency response third-party contract resources into the legacy UP emergency response contractor network and the legacy NS emergency response assets into the legacy UP response network.

Dispatching. Applicants expect that in the initial phases of integration, the legacy UP and NS dispatching centers will maintain independent operations, each utilizing their respective train control systems. Applicants anticipate that, prior to any transition of train dispatcher operating systems, the combined railroad will conduct a thorough review of rules specific to UP and NS to ensure differences in dispatching rules and procedures are addressed. Applicants expect that UP/NS will make changes to the legacy operating systems only when safe and effective operations can be maintained and further improved.

Highway-Rail Grade Crossing Systems. Applicants are dedicated to promoting highway-rail grade crossing safety and reducing the frequency of blocked crossings. Applicants anticipate that UP/NS will continue to operate with separate crossing programs in the near term following the combination. Applicants expect to perform a comprehensive review of available programs and practices to determine the best fit for the combined railroad. Applicants anticipate that ultimately the combined railroad will primarily adopt UP's program to promote and maintain crossing safety and reduce blocked crossings.

Personnel Staffing. The end-to-end nature of the proposed combination has important positive implications for safety-related staffing. Applicants project that over the first three years after the transaction, more than twice as many positions that are reportable under 49 C.F.R. § 244.13(j) will be created as will be eliminated, with particular craft employment growth in the areas of train and engine service and car and locomotive maintenance. There will be limited personnel impacts in the areas

of dispatching operations and yard and terminal service. There will be no personnel impacts in the areas of maintenance of signal and train control systems, devices, and appliances; hazardous materials operations; and managers responsible for oversight of safety programs. Like all other aspects of the integration, workforce adjustments will be implemented gradually and in phases, with affected roles preserved until the associated operational integration is complete. Applicants' plans further include ensuring that all personnel receive the requisite safety training, qualification, and certification or recertification for the duties they will perform in the combined UP/NS system.

Capital Investment. Both UP and NS make significant investments to enhance their networks' service, efficiency, and safety. For example, UP spent $3.4 billion on capital expenditures in 2024, while for the past three years, NS has invested approximately $2 billion or more per year across a range of capital investments. Applicants expect that following the combination the combined UP and NS will continue to invest in safety, and will continue to leverage system-wide data to make targeted investments in infrastructure and technologies that reduce derailments and other safety risks.

Information Systems Compatibility. UP is an industry leader in railroad information technology (IT), and employs many state-of-the-art systems for efficient, safe operations. NS likewise has invested heavily in such systems. Applicants are committed to a careful, coordinated process to ensure that their IT systems, which should be largely compatible, will be integrated safely and without interruption. This

process will include maintaining separate certification accountability systems, overseen by the legacy UP engineer and conductor licensing team in coordination with legacy NS personnel, until implementation of a unified system. Applicants expect that UP/NS will execute IT integration in phases, and will follow a defined process for integration, with comprehensive testing and validation to ensure the integrated system performs as expected.

III. Corporate Culture

Both UP and NS have a strong corporate safety culture. Applicants expect that the combined railroad will be similarly committed to a high level of safety in its operations, building on best practices of the legacy railroads.

A. Corporate Culture at UP

UP's goal is to be the safest railroad operating in the United States and all personnel at UP work every day to reach that goal. As UP's Chief Executive Officer (CEO) Jim Vena made clear in his verified statement (filed in Volume 1 of the Amended Application), "UP's number one priority is safety." Safety is not an afterthought—UP personnel are required to make safety an integral part of their day-to-day work and to incorporate safety principles in all of UP's decisions. Moreover, UP understands that safety and productivity go together: Safe work not only protects the public and UP employees, but also prevents disruption of operations, which supports UP's ability to operate efficiently and effectively and grow its business.

UP's dedication to safety is reflected in its excellent safety performance. UP had the second-lowest personal injury rate among all Class I railroads in 2024, and its personal injury rate fell further in 2025. In 2025 serious injuries were down by 29

percent from 2024, and minor injuries were less frequent as well. Contractor injuries likewise are rarer across the UP system.

UP has also made substantial progress in its derailment incident rate, which improved by 20 percent from 2023 to 2024, with a comparable further reduction in derailments during 2025. UP's strong safety performance is due to its robust safety systems and programming and its dedicated safety personnel, which combine to create a strong safety culture throughout UP.

UP's executive leadership team sets the tone for UP's safety culture, and all employees irrespective of their position are personally responsible for the safety of other UP employees, customers, pedestrians, motorists, and rail equipment and cargo. In addition, UP's robust safety processes—including mandatory safety training—help ensure that all UP employees are fully educated about and capable of implementing UP's safety commitments in their respective areas.

UP utilizes sophisticated data collection and analysis systems to track trends, identify potential safety issues quickly, and measure the success of its safety processes against key performance indicators (KPIs). For example, in 2023, UP performed a root cause analysis of thousands of incidents to refresh its safety strategy. This enabled UP to identify 12 critical safety rules that address behaviors that contributed to approximately one-third of UP's reported railroad injuries and incidents. UP then developed and implemented targeted policies and training to reinforce these critical safety rules throughout its operations. UP saw improved compliance and safety outcomes as a result of these changes.

1. Fostering an Effective and Positive Safety Culture

UP's safety processes and initiatives provide structured frameworks that encourage open communication, participation, risk identification, and continuous improvement. UP promotes a safety culture that embodies the following characteristics:

- **Informed**. UP employees and contractors understand the risks inherent in their areas of operation and receive the training, knowledge, and experience to manage those risks.
- **Just & Caring**. UP prioritizes fairness, respect, empathy, and the well-being of employees.
- **Flexible**. UP encourages innovation, flexible work practices, and adaptability.
- **Learning**. UP emphasizes continuous improvement and development through training and knowledge sharing.
- **Disclosing**. UP promotes openness, honesty, and safe communication of thoughts, concerns, and mistakes in a non-retaliatory environment. These lines of communication run from the front-line all the way up through the CEO and the Board of Directors to regulatory agencies.

2. Promoting a Robust Safety Culture Through Leadership and Organization

UP's CEO and senior executives actively promote the railroad's robust safety culture. Many of UP's senior leaders, including its CEO, Vice President and Chief Safety Officer (VP & CSO), and General Director of Operating Practices, have firsthand knowledge of railroad operations and have held various positions in the field, including unionized positions. UP's Operating Department is led by two Senior Vice Presidents of Operations, both of whom began their careers in the operating crafts and held multiple roles in field operations, resulting in 47 years of cumulative experience and extensive expertise in the realities and necessity of operating safely

in the field. As a result, UP's leadership team knows the practical importance of safety procedures and the effect a strong safety culture can have at every level of a railroad.

Critical safety roles report directly to upper management. UP's Safety Department is led by UP's VP & CSO, who reports to UP's Executive Vice President of Operations, the CEO, and UP's Board of Directors. Key operations personnel who report to the VP & CSO are housed within the Safety Department, which includes:

- The Operating Practices team, led by the General Director of Operating Practices. This team is responsible for the safety of train operating practices, such as train handling, car switching, and preventing derailments. The Operating Practices team performs 24/7 monitoring of trains and works closely with the dispatch center and train crews to ensure the safe running of trains.
- The UP Police Department (UPPD), which includes the field operations team and the Response Management Communications Center (RMCC), which is UP's critical call dispatcher and incident response center.
- The hazardous materials team, which works to prevent and respond to hazardous material incidents.
- The environmental team, which focuses on environmental remediation.
- The industrial hygiene team, which oversees occupational health and safety programs.

In addition, as described elsewhere in this submission, UP has invested significant resources in training, programming, and other investments that help reinforce UP's commitment to continuously reviewing and improving its practices.

The Safety Department also works closely with the Law Department to emphasize ethics and compliance across UP's business. The Law Department's responsibilities include managing the company's Values Line for reporting business

ethics or compliance concerns, managing UP's programs for accident and injury reporting, and providing support for drug and alcohol testing and engineer and conductor certification programs.

3. Enterprise Management as a Foundational Part of Corporate Safety Culture

UP implements its safety culture through well-established and documented systems and practices. A central element is UP's Safety Management System (SMS), which is a formal, organization-wide system for integrating and prioritizing safety and risk management considerations into planning and operational activities. The SMS provides a structured framework that encourages open communication, participation, risk identification, and continuous improvement, creating an environment where safety is valued at all levels.

The SMS, which is described in a document posted on the company's internal website, provides all employees a centralized resource for understanding, applying, and disseminating the company's safety strategy through action-oriented programs. Key elements of the SMS—such as the safety incident reporting requirements—are provided in training materials. UP's Executive Vice President of Operations is accountable for all aspects of the SMS, including the Company's compliance with, and annual review and continuous improvement of, the system.

A key feature of the SMS is risk analysis and mitigation. UP identifies operational risks and documents those risks and their sources in electronic risk registers. UP maintains a centralized System Risk Register, and local service units maintain their own Local Risk Registers. Additionally, yards and terminals maintain

Local Risk Identification and Mitigation maps, which identify general and specific hazards and risks mapped onto operating routes. UP's risk analysis, based on data in these risk registers and maps, informs UP's Safety Action Plans, which contain both safety metrics and required safety-related activities.

In addition to the SMS, UP employs its Risk Reduction Program (RRP). The RRP is a comprehensive, system-oriented approach to safety that allows UP employees to identify and analyze hazards and develop plans to mitigate or eliminate them. UP utilizes the RRP to help reduce risks within all UP operations, and to all employees, activities, assets, and facilities under the railroad's jurisdiction, custody, and control. The responsibility and authority for maintaining the RRP is assigned to UP's VP & CSO. The FRA has approved UP's RRP in accordance with 49 C.F.R. Part 271.

4. Use of Technology to Improve Safety

UP invests significantly in technologies that support safe operations, which include energy management systems that make train handling more consistent and safer; enhanced defect detection; wayside detection devices; simulation tools; and communication tools. UP also invests heavily in its hundreds of IT professionals, who help deploy, operate, and maintain IT systems that are key to safety functions. Between 2020 and 2024, UP made an average of $3.3 billion in capital investments annually, including in a variety of safety programs and technologies, including investments in its infrastructure, facilities, locomotives and freight cars, and technology.

5. Encouragement of Employee Involvement, Collaboration, and Communication to Promote Safety

UP's unions and employees are critical parts of UP's safety culture. UP's Peer Based Safety programs are voluntary, employee-owned processes focused on training, observation, and feedback. As one example, operations employees are expected to start each shift with an employee-led safety briefing. This training process covers various topics, including existing and potential hazards, scope of work, tools and equipment, awareness of work groups, Personal Protective Equipment (PPE) requirements, and responsibilities and assignments. Employees who do not have a clear understanding of the task are empowered to speak up and request further instruction.

In 2024, UP conducted a Safety Culture Assessment with help from a neutral third-party company. During the assessment, UP solicited feedback from more than 27,000 employees, conducted 15 employee focus groups, and held 15 listening sessions with more than 65 labor representatives. The assessment yielded invaluable feedback and resulted in numerous improvement opportunities, which UP has worked diligently to implement. Since the survey, UP has implemented multiple safety improvement initiatives to address the opportunities identified via employee feedback, including by enhancing training and improving and replacing equipment.

6. Employee Participation in Safety-Specific Programming

UP's safety programming emphasizes that safety is the railroad's priority as well as the personal responsibility of each employee. UP's safety philosophy is embodied in its Courage to Care safety initiative. This is a personal commitment that

all UP employees make to promote safety; it encourages craft professionals to intervene when they believe their colleagues have committed or are about to commit an unsafe act. The Courage to Care initiative is implemented through safety programming, including a "Go Home Safe" presentation and video series on critical safety rules, and safety stand down meetings, which are designed to encourage employees to back each other up and speak up when unsafe or at-risk behavior is observed. Courage to Care asks all employees to "do the right thing" at all times.

7. Use of Specialized Police and Response Management Teams to Further Promote Safety

UP has its own dedicated law enforcement division: the UPPD. The UPPD consists of sworn special agents and non-sworn personnel. UPPD officers are fully commissioned peace officers who enforce local, state, and federal laws within their jurisdiction, which spans multiple states across the western two-thirds of the country. UPPD's core functions include enforcing compliance with safety regulations; collaborating with local, state, and federal agencies to address emergencies and security concerns; and investigating crimes such as trespass. UPPD's safety culture is reinforced through its training program, which prioritizes agent and public safety through rigorous and practical instruction, regular assessment, advanced technology, and a strong emphasis on communication, de-escalation, and emergency response skills.

In 2024, UPPD introduced the Safety Incident Response Team (SIRT), a committee composed of command staff and department trainers. SIRT convenes monthly to review incidents and identify continuous improvement opportunities.

After the creation of the SIRT, UPPD experienced a 77 percent reduction in negligent vehicle accidents and a 57 percent decrease in reportable personal injuries.

The UPPD organization also includes the RMCC. The RMCC supports UP and the UPPD operations by managing communications, coordinating responses, and facilitating efficient information flow during emergencies and day-to-day incidents across UP's rail network. The RMCC is integral to both safety and operational effectiveness, supporting timely coordination between law enforcement, railroad operational teams, and external agencies.

8. Validation of Safety Systems through Testing, Monitoring, and Audits

UP meets its regulatory compliance and assurance responsibilities through rigorous application and continuous improvement of its safety programs and audits of its Safety Action Plan process. Additionally, managers perform regular operational testing and compliance monitoring of employees and record the results in UP's Employee Quality Management System (EQMS). Managers also share testing observations with employees through the Coaching, Observation, Mentoring, and Monitoring with Integrity and Trust (COMMIT) model, which requires operations managers to engage directly with craft employees following field observations, in a positive and respectful manner. UP regularly assesses safety-related testing results against quantified targets. Additionally, the Senior Director of Safety, who oversees UP's Operational Testing Program (pursuant to 49 C.F.R. § 217.9), conducts annual COMMIT reviews with each Service Unit.

9. Regular Assessments of Safety Performance to Drive Continuous Improvement

UP measures the success of its safety processes against KPIs. UP places a strong emphasis on internal safety data collection to measure progress towards KPIs. Two primary performance indicators UP monitors are its personal injury rate (the number of reportable injuries for every 200,000 employee-hours worked) and derailment incident rate (the number of reportable derailment incidents per million train miles). UP reports to the FRA all personal injuries and derailment incidents that meet the agency's reportable criteria.

UP's safety data systems, coupled with in-house expertise, allow for rapid detection and analysis of developing trends on a regular basis. If the KPIs indicate a concerning trend, UP immediately takes action to investigate and fix it—for example, by developing a targeted mandatory training to address the issue.

B. Corporate Culture at NS

At NS, safety is a core value and the lens through which the railroad views every decision. NS is committed to safety excellence. It has—and continues to build—a strong corporate culture focused on safety. As NS explains in its "Vision+Values" statement, safety is more than a priority, and the mission is to provide safe and reliable service to customers and ensure every employee returns home in the same condition they came to work. NS invests in training and technology to improve the resilience and safety of the railroad in every NS facility and every community in which NS operates.

1. Employee Engagement in Safety Culture

NS's culture of safety starts and ends with NS's people. From the day an employee starts work at NS, safety practices and protocols are a part of everything they learn. Supporting employees' career-long commitment to safety, NS has Local Safety Service Committees made up of frontline craft and management railroaders working collaboratively to strengthen communications, proactively identify workplace hazards, and mitigate risks in the railroad environment, all supporting safe and efficient operations. Since mid-2024, more than 2,000 NS employees have attended safety leadership development events, bringing leaders from across NS together to advance a "Speak Up" safety culture aimed at empowering all employees to take ownership of their personal safety and the safety of those with whom they work. All employees are encouraged to voice their insights on improving safety, efficiency, and the overall work environment. In fact, NS has led the way in implementing the Confidential Close Call Reporting System (C3RS) pilot program at a Class I railroad. NS's C3RS pilot, part of a joint project involving both the FRA and NASA, enables craft employees included in the pilot to report safety concerns with certainty that such reports will not result in discipline.

2. Investments in Safety Assessments and Improvements

NS maintains the ultimate goal of zero accidents or injuries. Following the derailment in East Palestine, Ohio, NS has redoubled its efforts and made substantial investments to review and improve its safety culture and performance. Among other actions, in May of 2023, NS appointed Atkins Nuclear Secured (now AtkinsRéalis), led by Admiral Kirk Donald, U.S. Navy (Ret.), an independent executive consultant

working with the Atkins Nuclear team, to conduct an independent review of the company's safety-first culture. Atkins Nuclear and its predecessor companies have worked on some of the toughest infrastructure and safety challenges related to the nuclear sector for decades. The comprehensive safety assessment for NS identified 18 primary recommendations, all of which NS incorporated into and addressed in safety initiatives during the successive two years, and which remain fully integrated into NS's safety program today. For example, Atkins Nuclear recommended that NS improve learning and dissemination of learning from injury and accident events to reduce the potential for recurrence; improve the response process for unexpected conditions, including wayside detector activations; and improve teaming across operational departments. The FRA noted in a 2024 audit that NS's hiring of Atkins Nuclear Secured "demonstrated enhanced focus on safety."[3]

In addition to the Atkins Nuclear safety assessment, NS received an FRA Safety Assessment in August of 2023. The 19 FRA recommendations presented in the assessment related to communications, training, trust, and going above and beyond regulatory minimums. NS worked for a year to develop action items in response to the FRA recommendations and launched initiatives to implement each item. NS continues to monitor the success of the action items on an ongoing basis. NS also coordinated closely with the FRA by providing frequent updates, including through NS senior leadership briefings for senior FRA leadership. By June 2024, NS had

[3] Federal Railroad Administration, FRA Audit Report Norfolk Southern Railway (May 15, 2024), https://railroads.dot.gov/elibrary/ns-risk-reduction-program-part-271-audit-report (FRA Audit).

implemented substantial changes to fully address the FRA's recommendations. For example, NS enhanced conductor training to include additional time at the McDonough Training Center; the railroad emphasized additional coaching, teaching, training, and learning in order to correct skill gaps and mistakes on the job; NS provided additional training for personnel with less than one year of experience; and NS enhanced communications protocols between dispatchers, the Wayside Help Desk, and field personnel. NS also incorporated into its safety program National Transportation Safety Board recommendations issued to NS and the rail industry generally.

3. Supervision of Safety Efforts

NS's Vice President & Chief Safety Officer, a direct report to the Chief Operating Officer, leads NS's safety efforts. That position has five direct reports overseeing various elements of NS's safety operations: Director Technical Training, responsible for all new hire and recurrent safety training; Senior Director Operations Safety, responsible for government reporting, safety technology, safety analytics, operations research and tests, and materials engineering; Director Field Safety, responsible for field safety assessments, audits, investigations, and evaluations; Director System Safety Programs, responsible for the NS RRP, industrial hygiene, fire and life safety, and other regulatory interactions; and System Director Safety & Operations, responsible for overseeing operating rules, procedures, and practices. Numerous safety professionals work under each of these functions to ensure safety across the NS system. This includes 26 field safety personnel—up sharply from just four field safety personnel a few years ago.

An FRA audit in 2022 revealed certain deficiencies in NS's 49 C.F.R. § 217.9 supervisory qualifications recordkeeping. Specifically, records memorializing the demonstration of proficiency of supervisors performing rules testing were retained in the supervisor's virtual personnel file and, in some cases, hard copy. NS's decentralization of division offices resulted in FRA's audit finding of missing documentation of supervisor qualification records in certain cases.

NS has worked to address the issues identified by the FRA through centralized, digital storage of § 217.9 records. NS created a digital learning module in its Learning Management System (LMS) to train on the requirements of its 217.9 testing program. The learning module, which provides a review of the § 217.9 testing program, is now required annually for qualified testing supervisors and given to all new supervisors.

For the demonstration of proficiency, NS transitioned to a more robust process using its Rail Tasker testing platform to electronically record the demonstrations of proficiency. Testing supervisors must complete a proficiency checklist in the platform as a prerequisite to receiving access to perform and record rules testing activity. NS supervisors that were previously qualified on § 217.9 testing requirements are in the process of completing remedial training using the learning module, and completing renewed demonstrations of proficiency in an abbreviated form. These steps will establish a renewed and centralized digital record of § 217.9 testing qualifications for all current and future testing supervisors.

4. McDonough Training Center and RRP

For over five decades, the Norfolk Southern Training Center in McDonough, Georgia, has played a central role in the development and education of NS

railroaders, as a hub for fostering a culture of safety. In 2024, more than 4,500 employees attended one of more than 330 unique training offerings at the McDonough Training Center.

NS continues to implement its RRP, as required by FRA's rules. As with UP, NS's RRP is a comprehensive, system-oriented approach to safety that allows NS employees to identify and analyze hazards and develop plans to mitigate or eliminate them. The FRA noted in its 2024 audit that, although there is continued work to be done, "NS is heading in a positive direction" as it rectified audit findings and implemented recommendations from its internal assessment. All these efforts culminated in NS's best safety performance in over a decade.

C. Integration Plan

As reflected in the descriptions above, UP and NS share a deep-rooted commitment to safety as a core value. UP's culture is anchored in system and process management, as well as a reliance on long-standing KPIs to monitor and improve safety performance. NS complements this with a people-first philosophy. Its "Speak Up" culture empowers employees to take ownership of safety and provide direct, honest, and caring feedback. As described above, both railroads have taken important steps to improve safety in recent years and have achieved substantial improvements in accident and injury rates. These results reflect a disciplined approach to risk mitigation and continuous improvement.

As part of the integration of the two rail systems, UP/NS will conduct a risk-based hazard analysis to identify risks faced by the joint company, develop strategies to mitigate the identified risks, and make investments to counter them. The combined

UP/NS will continue using UP's data-driven approach, including setting clear and measurable KPIs, monitoring progress, and making informed decisions that enhance safety and efficiency across the combined network. Among other things, Applicants anticipate integration of the following:

SMS. Applicants anticipate employing UP's existing best management practice approach—in which it benchmarks against other companies and adopts best management practices—to design the SMS for the combined company. Applicants anticipate that UP and NS legacy employees will review, assess, and integrate the best management practices of each railroad, as well as benchmark against outside companies to ensure that the combined railroad's safety system is best in class.

RRP. Applicants will review and assess their RRPs with a view towards integration. Applicants anticipate that the combined railroad will adopt UP's RRP, augmented as necessary to cover the total operations of the combined railroad.

Employee Feedback. Both UP and NS currently use a variety of approaches to seek direct feedback from frontline employees. Additionally, NS operates a pilot program to collect safety concern information directly from employees, referred to as C3RS. As part of the integration, UP/NS will assess how best to integrate the two legacy employee feedback programs. For example, Applicants expect to assess NS's Speak Up program for employee reporting and Local Safety Service Committees for employee engagement as potential complements to UP's analogous programs. Subject to final implementing language, moreover, UP expects to participate in C3RS, with the combined UP/NS doing so as well.

Safety Department Structure. Applicants anticipate conducting a thorough review of UP's and NS's safety department structures to determine how best to integrate NS into UP's safety structure. For example, while UPPD reports through UP's Safety Department, NS's Police Department reports through the Chief Operating Officer. Applicants anticipate that they will assess the effectiveness of the two approaches and that UP/NS will align the reporting structures of the integrated police department accordingly.

IV. Training

As Applicants also describe in the Amended Application's Service Assurance Plan, both UP and NS have robust safety training programs that help them achieve a high level of safety. Applicants expect that the combined railroad will take advantage of the best features of each railroad's program and will achieve even higher levels of safety following integration.

A. Training at UP

UP maintains a robust training program that satisfies regulatory requirements and furthers the railroad's operational goals. In 2024, UP delivered 160 courses focused on safety, regulations, certifications, operating rules, company policies, and technical skills. Approximately 98 percent of UP's roughly 27,000 craft professionals train in the field at 88 designated hub locations that offer convenient travel accommodations and dedicated onsite resources.

The Training Department is overseen by a General Director with a background in field operations and train dispatching. The team's 13 instructional designers and facilitators utilize industry standards to define, design, develop, and deploy the

training curriculum. UP's Train, Engine and Yard (TEY) Department has 41 qualified instructors who possess Class 8 conductor, Class 6 remote-control, and Class 1 engineer certifications. The Engineering Department has 31 qualified instructors. The Mechanical Locomotive Department has 25 qualified instructors, and the Mechanical Car Department has 13 qualified instructors. There are six instructors for dispatcher apprentices. Two are qualified instructors, and four additional instructors deliver refresher training.

All newly hired employees receive a combination of instructor-led training (ILT), computer-based training (CBT), and hands-on application along with on-the-job training (OJT) at various locations and durations according to regulatory requirements and UP standards. All employees must complete annual safety training to ensure their safety and the safety of others.

UP's training programs are developed by internal instructional designers or qualified vendors with recognized credentials in instructional design. Each program follows a structured design and review process, incorporating pilot sessions. Trainees are asked to provide feedback on their experience, and this information is used to further refine learning approaches.

Newly introduced courses are supported by train-the-trainer sessions to ensure delivery is consistent and effective. UP's Training Department, in partnership with department subject matter experts, regularly checks the overall training curriculum to ensure it meets company needs and policies, regulations, certifications, and operating rules, and builds the required technical skills.

1. Employees who perform train and engine service

New hire conductor candidates begin with classroom instruction covering the full scope of conductor responsibilities and expectations. These topics include compliance with 49 C.F.R. Part 240 and Part 242. Upon successful completion of all training requirements, students are awarded Class 8 conductor and Class 6 remote-control operator certification. In 2024, the FRA conducted an audit of UP's conductor training program, and concluded UP met all applicable requirements.

The new hire conductor training is a 14-week program that consists of six weeks of classroom training and eight weeks of OJT. Classroom training includes an introduction to General Code of Operating Rules (GCOR), critical safety rules, yard rules, mainline principles, and review of a conductor proficiency checklist. Safety is a major focus of new hire conductor training, which covers the use of PPE, safety equipment inspection, identifying and reporting hazards, and conducting effective job briefings. During the program, students gain firsthand experience in safety procedures and learn to interact responsibly with railroad equipment through supervised practice, desktop applications, and simulators.

New hire conductor training also includes remote control operator (RCO) training. RCOs receive a minimum of 120 hours of training to be certified. This consists of 10 days of classroom instruction and five to 20 days of OJT. Each candidate must pass a final exam with a score of 85 percent or higher. During OJT, the student must perform all the critical tasks contained in UP's Proficiency Checklist before receiving their final performance evaluation. The final performance evaluation is administered by a designated supervisor of remote-control operators (DSRCO). The

final evaluation duration for demonstrating proficiency to the DSRCO must be a minimum of two hours when operating a physical locomotive and four hours when performed on a simulator.

For student locomotive engineer candidates, UP's training program builds on conductor knowledge and focuses on train handling skills, including the requirements of 49 C.F.R. Part 240. Upon successful completion, trainees receive a Class 1 (engineer) certification. The minimum duration of student locomotive engineering training is 17 weeks, including seven weeks dedicated to instructor-led classroom sessions and locomotive simulator training. Certification is awarded only after the student fulfills all requirements in 49 C.F.R. Part 240 Initial Certification of Locomotive Engineers.

In terms of recertification for conductors and locomotive engineers, UP provides triennial rules training covering industry safety trends and new technologies. The training includes 10 hours of classroom instruction and exams. Locomotive engineers must also complete a recertification ride once every three years.

2. Employees who inspect and maintain track and bridges

New engineering employees who will work on track and bridge infrastructure attend a two-week training program that includes Roadway Worker Protection (RWP) training, OJT, and Proficiency Qualification Checks. This program, which is designed to onboard new engineering employees in the Track and Signal Departments, focuses on safety, operational readiness, and hands-on application of field related tasks. The OJT portion includes hands-on instruction in the field covering PPE, lookout duties, lone worker procedures, flag person responsibilities,

roadway maintenance machines, adjacent track protection, fall protection, and torch use. Employees who have completed this training are expected to apply RWP protocols specific to their assigned task and environment. This includes the ability to conduct comprehensive job briefings, identify hazards, and understand communication protocols. Employees must demonstrate safe and effective use of tools and equipment including rail saws, drills, torches, hy-rail vehicles, and cranes. They must also perform a fire risk assessment where applicable, reinforcing hazard mitigation and emergency preparedness. This two-week onboarding process is structured to fulfill 49 C.F.R. Part 214 and Part 243 requirements.

Employees who supervise restoration or renewals of the track must complete applicable training to comply with 49 C.F.R. § 213.7(a)–(c). The training increases knowledge and skills relating to track inspection, maintenance, and renewals. Training consists of instruction on FRA Track Safety Standards, including defect identification, remediation, proper reporting, and documentation. Employees with less than one year of supervisory experience must complete a 40-hour classroom training in Track Safety Standards. Employees with more than one year of supervisory experience may complete either UP's FRA Track Safety Standards course online, or the Track Safety Standards classroom training.

To qualify as an inspector of UP's 237 miles of Class 6 high-speed track under 49 C.F.R. § 213.305, employees must complete between 40 and 120 hours of specialized training, depending on their level of supervisory experience. In addition,

these employees are required to complete eight hours of Continuous Welded Rail (CWR) training.

3. Employees who inspect, maintain and repair on-track equipment

Mechanical employees who perform inspections, testing, maintenance, and repair on locomotives and cars attend a six-week training program designed to qualify them as qualified mechanical inspectors (QMIs). The six-week program includes the following courses:

- Blue signal training, which equips mechanical employees with essential skills in the proper application of blue signal protection, accurate alignment of switches, and use of derails for track protection, in accordance with 49 C.F.R. Part 218.
- Forklift training, which includes a one-hour CBT followed by a one-hour performance assessment.
- Mechanical locomotive daily inspection training, which includes inspections of the locomotive cab, engine, walkways, fuel/cooling/oil systems, wheels, sander operations, and lighting in accordance with 49 C.F.R. Part 229 and Part 243 regulations.
- Additional training specific to the employee's duties, covering topics including fall protection, periodic and annual inspection procedures, air brake and departure air test, Positive Train Control (PTC), car safety standards, and car welding.

For mechanical car technicians, UP offers three specialized training courses focused on railcar repair. These courses emphasize the application of the Association of American Railroads (AAR) Field Manual rules and standards to accurately identify defective components, perform appropriate repairs, and bill car owners for parts and services using an electronic billing system.

UP provides refresher training triennially to meet relevant FRA regulatory training requirements. In addition, UP provides Train Yard Air recertification training to meet FRA Brake System Safety Standards.

4. Dispatchers or operators

The initial Train Dispatcher Training Program is 22 to 24 weeks, composed of 12 weeks of classroom training and no less than 10 weeks of OJT.

- Classroom instruction covers topics such as GCOR, timetables, system special instructions, Rules Governing Train Dispatchers and Control Operators (RTDCO), Computer-Aided Dispatch (CADX) software, train dispatcher policies, and field visits to observe learned concepts in real life. Students are provided with periodic quizzes and must achieve a score of 90 percent or higher on three exams to complete the classroom section of training.

- OJT involves working under the supervision of a train dispatcher performing all facets of the job. Each student must demonstrate proficiency by achieving bi-weekly OJT milestones with their training train dispatcher. If a student is unable to demonstrate proficiency, remedial training is provided. During the last few weeks of OJT training, the train dispatcher candidate is provided with simulator training covering over 50 scenarios. Prior to qualification, the train dispatcher candidate is evaluated by a train dispatcher rules manager to verify their understanding of applicable operating rules and CADX software functions.

The initial Control Operator Training Program is up to 12 weeks, consisting of four weeks of classroom training and then OJT.

- Classroom instruction covers the same topics as for train dispatchers.

- OJT consists of up to eight weeks working under the supervision of that day's control operator performing all facets of the job. Prior to qualification, the control operator candidate is evaluated by their supervisor to verify their understanding of applicable operating rules and CADX functions.

Every year, train dispatchers and control operators must pass exams on GCOR/RTDCO, emergency preparedness, and hazardous materials, with a score of 90 percent or higher, consistent with UP's 49 C.F.R. § 217.11 submission.

Refresher training for train dispatchers and control operators consists of attending an in-person or virtual annual rules class. In addition, train dispatchers attend bi-weekly pre-shift meetings to ensure they understand all relevant rule or policy changes and any operational abnormalities.

5. Employees who inspect and maintain signal and train control devices and systems

UP Engineering employees assigned to signals participate in the same two-week onboarding program as those working on track and bridges summarized in the track and bridges training subsection above. Additionally, these employees complete a comprehensive four-phase signal training program, with each classroom phase lasting two weeks, for a total of eight weeks of classroom training. The signal training program also includes four weeks of hands-on instruction, where employees gain practical experience working with track circuits, switch controllers, power switches, and signal systems. Topics covered include train detection, crossing operations, Centralized Traffic Control (CTC), electric locks, and microprocessor-based systems. The signal training also provides initial instruction on PTC, introducing fundamental railroad signaling principles and PTC system requirements. The curriculum emphasizes adherence to UP standards and compliance with 49 C.F.R. Part 234 and Part 236 regulations.

6. Hazardous materials personnel

UP provides the training required by 49 C.F.R. Part 172, Subpart H to its hazmat employees, including IT personnel who play a role in the transportation of hazardous materials.

All Occupational Safety and Health Administration (OSHA) 29 C.F.R. § 1910.120-qualified UP personnel (including new hires and existing employees) complete initial hazmat training over the course of eight weeks. Training components include the tank car inspection program, response scenarios, advanced leak mitigation, and advanced transfer operations. In addition, the team receives industrial firefighting training to safely extinguish fires and operate UP's mobile foam trailers. An eight-hour annual refresher course, which includes medical monitoring, is provided to UP-Hazmat team employees and the UPPD Special Agent hazmat personnel. The awareness-level training for all other employees is assigned annually via the LMS.

Hazardous materials training is held in Omaha, Nebraska, and in the field at the employee and new hire locations. The UP-Hazmat Team currently has 18 qualified instructors who are OSHA § 1910.120-certified and considered tank car specialists. Courses include classroom and hands-on activities using real-world props and scenarios and cover topics such as how to contact the railroad during an emergency, understanding shipping documentation, derailment safety considerations, and railroad response assets at an incident site. Throughout the training, instructors outline roles each stakeholder plays during a response and their respective responsibilities.

7. Employees who maintain or upgrade communication systems affecting rail operations

UP's training for employees who maintain or upgrade communication systems affecting rail operations meets regulations for Grade Crossing Safety and PTC and is approved by the FRA. These employees start with the same two-week onboarding program developed for track and bridge employees. Employees also must complete Telecom 101 training, which focuses on general standards of telecommunications equipment and additional training on networking, communication, and PTC, consistent with Federal Communications Commission (FCC) and UP requirements.

8. Supervisors of operation employees

All new operating managers complete courses and certifications associated with their management areas, along with personal development courses such as time management and leadership skills. Participants learn technical skills and company and federal rules, and they build a strong support network.

The operations management training for newly hired employees spans 19 weeks, including 17 weeks of OJT for transportation employees and six weeks of OJT for engineering and mechanical employees. New operating managers with a minimum of 2.5 years of operating experience receive field management training, with a duration of three weeks for transportation employees and two weeks for engineering and mechanical employees.

Every three years, operating managers must complete courses on the requirements of 49 C.F.R. § 217.11 and Part 243 (operating), Parts 240 and 242

(transportation), Part 236 (engineering), and Parts 232 and 236 (mechanical). These courses are delivered through both ILT and CBT.

In compliance with 49 C.F.R. § 217.9, UP's COMMIT program provides an environment where field employees learn safety and operating rule compliance through manager-employee conversations about day-to-day activities. COMMIT focuses on results-based, in-person coaching and engagement, promoting positive employee-manager relationships. Consistent with the provisions of UP's FRA-approved § 217.9 submission, operating managers complete a five-hour training at a field location or virtually. Once every three years, they complete a one-hour virtual refresher, also in accordance with UP's approved § 217.9 submission.

In compliance with 49 C.F.R. Part 219, operating managers complete a one-hour drug and alcohol training and then an online refresher training every three years. Participants gain familiarity with UP's drug and alcohol policy resources and how to recognize what the policy prohibits, identify the circumstances under which an employee will be required to submit to testing, and understand the procedures used to test for the presence of alcohol and controlled substances.

In compliance with 49 C.F.R. Part 225, operating managers also complete a two-hour online facilitated Accident, Injury, Reporting System course to increase awareness of FRA and company regulations related to accident reporting, along with the manager's role in reporting and compliance. Participants gain a basic understanding of accident/incident reporting and the federal requirements, including

those involving personal injury (employee and non-employee), rail equipment incidents, and highway-rail grade crossing collisions.

B. Training at NS

NS also maintains a robust training program that satisfies regulatory requirements and furthers the railroad's operational goals. Training is overseen by the Director of Technical Training, who directly reports to the Vice President & Chief Safety Officer. The Director oversees a team of 38 employees, including managers devoted to specific training topics such as communications and signals training, engineering training, mechanical training, and air brake training.

The programs administered by NS's Technical Training Team are designed with the input of affected employees as well as labor organizations. As a result, labor leaders from organizations such as the International Association of Sheet Metal, Air, Rail and Transportation Workers—Transportation Division, the Brotherhood of Locomotive Engineers and Trainmen, the Brotherhood of Maintenance of Way Employes Division, the Brotherhood of Railroad Signalmen, the Brotherhood of Railway Carmen, and the International Brotherhood of Electrical Workers all provide input and support for the training programs.

In 2024, NS delivered almost 75 courses focused on safety, regulations, certifications, operating rules, company policies, and technical skills. Training is provided at the McDonough Training Center, a state-of-the-art facility replicating real world operational training scenarios in a controlled environment. Training is also provided at field locations across NS's system.

Every new operating or field hire at NS receives a structured training program delivered through a combination of ILT, CBT, hands-on, and multimedia work at the McDonough Training Center. Among other innovative training tools, NS has created its Roundhouse, a digital library of training and instructional videos that demonstrate and reinforce safe and compliant operating practices that all employees can view to augment written study materials. Structured training is followed by OJT and on-site training, which varies in length and breadth depending on the specific work and location. For non-operating employees, a one-day safety training course is also available to ensure that everyone at NS has a working knowledge of the safety issues inherent in railroading. Refresher training is also delivered across the system to operating and non-operating personnel through micro-learning lessons delivered electronically on a variety of topics.

1. Employees who perform train and engine service

NS's Technical Training Team—reporting to the Safety Department—is responsible for delivering comprehensive training for new hires in train and engine service roles. In addition to the discussion here, this subject is discussed more extensively in the section on Qualification and Certification of Locomotive Engineers and Conductors (Section V.C) below.

New hire conductor candidates begin with classroom instruction covering the full scope of conductor responsibilities and expectations, including the requirements of 49 C.F.R. Part 242. The new hire conductor program includes a five-week[4] training

[4] NS increased its new hire training program from four weeks to five weeks after examining its process and consulting with its workforce, including labor leadership.

program, delivered through a blend of ILT, CBT, hands-on, and multimedia at the training center, followed by OJT that varies in length based on the complexity of the hire location. Training topics covered include physical aptitude, hazmat, signals, general railroad knowledge and component identification, and physical characteristics.

NS utilizes an exposure and mastery approach to OJT based on standards in its FRA-approved Part 242 submission. Under NS's approach, each location has specific customers, yards, line segments, routes, and functions that a conductor trainee must be exposed to in order to be qualified at that location. Assignments are identified that allow each conductor trainee the opportunities to garner the needed exposures and repetitions to safely perform the work at those locations. The procedure for selecting OJT assignments is comprised of the following five steps:

1. The Technical Training Team produces a list of all assignments working at a hire location and provides the list to local supervisors;

2. Supervisors at the hire location identify key assignments and recommend a number of exposures for each assignment. Supervisors will also identify alternate assignments that can serve as substitutes for a primary assignment;[5]

3. The list of recommended assignments is reviewed by a training coordinator and craft mentor to ensure that all territory for which the conductor trainee will be expected to work as a conductor is included

Extending the training has decreased the failure rate by over 50 percent. NS consulted the FRA on this change and was told to include it in its next periodic Part 242 update submission, which it will do.

[5] For example, a first shift pullback may be listed as the primary assignment with the second and third shift pullbacks serving as alternates. The assignments cover the same territory and perform the same functions and therefore are counted toward the required number of exposures.

and that a sufficient number of exposures are provided for each assignment;[6]

4. The terminal superintendent or a higher officer approves the assignments that were agreed upon by local supervision and the training coordinator; and

5. The manager technical training or higher officer provides final approval for the OJT plan.

For student locomotive engineer candidates, NS offers a comprehensive training program that builds conductor knowledge and focuses on train handling skills, including 49 C.F.R. Part 240 regulations. Upon successful completion, trainees receive a Class 1 (engineer) certification. NS's student locomotive engineer program is organized into two phases that contribute to the overall development of participants. Phase I consists of three weeks of structured training where trainees are exposed to and tested on the essential knowledge, skills, and abilities required for a locomotive engineer to perform safely. Phase II consists of a minimum of 16 weeks of OJT. Student engineers take initial certification rides evaluated by qualified designated supervisors of locomotive engineers (DSLEs). Certification is awarded only after a student satisfies all requirements in 49 C.F.R. Part 240 Initial Certification of Locomotive Engineers.

NS provides triennial rules training for certified train and engine employees to maintain certification, with an approximately 5-to-1 student-instructor ratio. Each year, NS recertifies about 900 TEY employees.

---

[6] For example, the training coordinator will ensure that all road assignments are a minimum of two round trips. The training coordinator will work directly with local supervisors on amendments as necessary to ensure that the appropriate exposures are included in the OJT assignment list.

Initial RCO training at NS is a minimum of 40 hours in-classroom training and a minimum of 40 hours OJT, although many employees far exceed those minimums. RCOs are reviewed annually by a qualified supervisor.

2. Employees who inspect and maintain track and bridges

All new employees who inspect and maintain track and bridges begin their two-week new hire training at the McDonough Training Center. The ILT covers all essential topics, including safety and general conduct rules, operating rules, federal regulatory requirements, NS wireless communication procedures, RWP rules, Rail Maintenance Machine (RMM) safety and procedures, bridge worker safety, and RMM operator and crane training. RMM training involves a blend of delivery methods, including online learning modules, hands-on exercises, and instructor-led training to cover topics such as hand tools, hydraulic tools, fall protection, and RMM with crane. After completing the course, new hires complete 60 days of OJT per 49 C.F.R. Part 243. The program is designed to ensure new employees are equipped with the foundational knowledge and skills required for safe and compliant field operations. Employees must also take a computer-based On-Track Safety (OTS) refresher course every two years following initial onboarding training.

All craft bridge employees must complete a Fall Protection Authorized User class and refresher training every two years. All engineering employees also take a class in proper use of air brake systems on RMMs.

3. Employees who inspect, maintain, and repair on-track equipment

NS's Safety Technical Training Team is responsible for delivering all new hire training for mechanical employees who perform inspection, testing, maintenance, and repair on locomotives and railcars. The six-week training program is designed to onboard mechanical employees who perform work on locomotives and freight cars. The program consists of four phases:

- Phase I is a Mechanical Safety Orientation, which spans one week and lays the foundation for safe and effective operations. It covers operating rules, practices, and standards, ensuring trainees understand expectations and protocols day one. Topics covered include blue signal fall protection and mechanical forklift training, and participants also learn to identify types of locomotives and are introduced to safety standards for locomotives and freight cars.

- Phases II and III, for locomotive craft professionals (machinists, electricians, boilermakers, sheetmetal workers/pipefitters) consist of six weeks of instruction at the McDonough Training Center.

- Phase IV is at the hiring location and consists of location-specific OJT requirements that vary in complexity based on operational needs. This final phase continues for the rest of the employee's first 488 days. Fireman/oiler employees complete their training entirely through OJT at the hiring location, tailored to the complexity of local requirements.

NS's QMI program is a one-week course to train employees in the locomotive daily inspection and departure air test in accordance with federal regulations and NS standards. Trainees become proficient in using technical publications, including federal and standard processes, to meet the requirements of 49 C.F.R. Part 229 for QMIs and 49 C.F.R. Part 243 for safety-related training. Key competencies include identifying locomotive components and defects, performing calendar day inspections,

testing air brake systems, applying blue flag protection, and adhering to locomotive safety standards and communication protocols.

Employees also receive training specific to their duties, covering topics such as: machinist skills, electrical skills, boilermaker and sheet metal/pipefitter skills, welding, and power brake law.

4. Dispatchers or operators

NS's Train Dispatcher Training team develops and delivers all train dispatcher training. The initial Train Dispatcher Training Program is up to 25 weeks, composed of the following:

- Two weeks of new hire conductor training in McDonough, Georgia.
- Seven weeks of classroom training in Tucker, Georgia, learning NS train dispatcher rules, NS's Operating rules, and the Unified Train Control System (UTCS) train dispatcher software.
- During the remaining weeks, employees undergo OJT to learn a specific territory. Train dispatchers must spend at least 12 weeks of OJT at a single desk working under the supervision of that day's train dispatcher performing all facets of the job. Train dispatcher students learning their second desk are given four weeks of OJT working under the supervision of a qualified train dispatcher working the desk. Each student must meet task performance standards and proficiency by achieving OJT milestones. Prior to qualification, the train dispatcher candidate must pass a territory qualification exam and meet performance standards for over 30 scenarios during a simulator test conducted by a Supervisory Instructor for Train Dispatcher Training.
- NS refresher training for train dispatchers consists of completing triennial rules refresher CBT and training videos. Train dispatchers are required to pass exams on rules, emergency preparedness, and hazardous materials every three years, in compliance with NS's 49 C.F.R. § 217.11 submission.

5. Employees who inspect and maintain signal and train control devices and systems

New hire communications and signals (C&S) employees complete many of the same programs as other engineering (maintenance-of-way and bridges and structures) employees. New hire C&S employees must complete a signal training program that is consistent with the requirements of NS's labor agreement for new hire signal employees. The training consists of nine weeks of classroom training interspersed with 13 weeks of OJT for construction and 21 weeks of OJT for maintenance. This training meets the requirements of 49 C.F.R. Part 234 and Part 236. The signal training consists of three phases:

- Phase 1 introduces electrical principles (voltage, current, resistance) and meter use. During this phase, employees complete other new hire training courses such as Lock Out Tag Out and drug awareness, as well as RWP awareness and PTC roadway protection to meet the requirements of 49 C.F.R. Part 214.
- Phase 2 provides hands-on training with reading prints (in detail), maintaining power switches and electrical logs, and automatic block. The training also covers operating rules and HOS.
- Phase 3 focuses on two-year testing, track authority, and high-level crossing work. PTC testing procedures and troubleshooting various signal and communication equipment are also covered.

In addition, refresher training is required every other year.

6. Hazardous materials personnel

NS provides its hazmat employees—as described by the regulation—with training required by 49 C.F.R. Part 172, Subpart H. The Hazmat Employee Training is administered to new hazmat employees at the training center in McDonough, Georgia, and the required refresher training is provided via the LMS. The training

covers general hazmat awareness, safety training, security awareness training, and function-specific training as required by 49 C.F.R. § 172.704.

In addition to providing the Hazardous Materials Employee Training required by 49 C.F.R. Part 172 Subpart H, NS maintains a Hazmat Sentinel Program that provides a 40-hour OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) training to a select group of NS personnel—referred to as Sentinels—whose job activities may require an increased awareness of hazardous materials and response activities. Currently, NS has around 300 Sentinels across all operating departments (Transportation, Mechanical, Engineering, Safety, Environmental, and Police).

All Sentinels undergo an initial 40-hour hands-on training at the Security and Emergency Response Training Center (SERTC) in Pueblo, Colorado. SERTC is a rail and hazmat-focused training facility operated by a subsidiary of the AAR that provides realistic and hands-on hazmat response preparedness training, including responding to a full-size derailment. All Sentinels must take an 8-hour HAZWOPER refresher training course annually.

For emergency response, Sentinels are certified as either "First Responder Awareness Level" or "First Responder Operator Level" under 49 C.F.R. § 1910.120(q)(6)(i) or (ii). The nine-member hazmat team is trained as "Hazardous Materials Technician" or "Hazardous Materials Specialist" under 49 C.F.R. § 1910.120(q)(6)(iii) or (iv).

7. Employees who maintain or upgrade communication systems affecting rail operations

Employees involved in communication system maintenance receive the training program for employees who inspect and maintain signal and train control devices, discussed above in Section IV.B.5. As part of this, they receive substantive training on the various types of signals and communications systems in service on NS property, including PTC technology.

8. Supervisors of operating employees

The NS operations management trainee program provides training for all new operating managers. The program includes courses and certifications related to employees' specific management areas. In addition to technical skills and knowledge of company and federal rules, such as recognition of the signs and symptoms of drug/alcohol impairment and derailment investigation training, participants also engage in personal development focused on corporate values and leadership. New operating managers participate in a program lasting six to 12 months, including three to seven months of OJT. For those who are new operating managers with prior craft experience, the training is shortened.

Operating managers attend periodic rules refresher training at intervals in keeping with the requirements for their particular supervised craft pursuant to 49 C.F.R. § 217.11 and Part 243 (operating), Parts 240 and 242 (transportation), Part 236 (engineering), and Parts 232 and 236 (mechanical). That may include triennial, annual, or even quarterly requirements. Such training is facilitated by field safety

representatives or road foremen of engines, technical training staff, or other operating staff qualified to administer rules instruction.

Additionally, NS initiated intensive in-person Safety Camps for management professionals in 2025. These sessions are intended to reinforce proper safety behaviors and enhance safety leadership. These two-day intensive trainings are held across the NS systems to classes of 30 to 45 employees per session with instructor-led content supplemented with intentional practice exercises.

C. Integration Plan

Applicants expect that integration will result in improved safety training across the combined railroad. Applicants initially will maintain UP's and NS's current, effective trainings until they are fully prepared for a cut-over to a program that combines the best practices of both railroads' training programs, with enhancements identified through review of other best practices. Current NS programs Applicants expect to integrate with UP's training curriculum include expanded use of "how to" videos consistent with NS's Roundhouse video library.

UP and NS training programs have key similarities that Applicants expect will aid the integration process. As described above, Applicants have similar curricula and OJT structure, and use similar technologies to promote learning. Each Applicant prioritizes instructors sourced from the craft. Applicants use compatible learning management systems, meaning that a course offering of one company can be uploaded into the other's system.

The UP and NS Training Departments are well-equipped to execute this integration. They have the tested tools and skills to internally develop curriculum,

online training, instructional videos, interactive e-learning modules, webinars, simulation exercises, job aids, digital manuals, and assessment tools. The UP team also has experience in training integration, having successfully integrated the Alton & Southern employee base into UP technologies and regulatory training standards in 2025. Applicants expect that this experience will help guide the UP/NS integration strategy. The combined network will ultimately rely primarily on UP's FRA-approved training curriculum where possible to promote systemwide consistency. However, certain NS training practices—as described in the Operating Rules section below—will be maintained where necessary (for instance, training on Northeast Operating Rules Advisory Committee (NORAC) in relevant areas), and NS training program strengths will be preserved and implemented across the combined network based upon Applicants' ongoing assessment of NS best practices.

Immediately after the combination, all legacy UP and NS training centers will remain open as consistent with current operational practices, and training programs will remain separate until all necessary inter-dependent protocols and consolidated rules are applied. Applicants expect that legacy UP and NS training staff will serve on committees, councils, and work groups to streamline and integrate training across all targeted employee functions and that the combined staff will ensure employees receive required training, including initial and recertification offerings, to prevent adverse impacts on safety and service. There is no current plan to eliminate training centers or designated places where training is conducted in the field. Subject to additional review and consideration of training needs, the combined railroad may

consider strategically adding training locations in legacy NS territory to enhance the combined railroad's ability to conduct localized field training as needed.

Applicants anticipate that UP/NS will gradually shift employee training applications and platforms to achieve overall integration within three years. Training, however, would not be integrated until the corresponding systems or rulesets have been integrated. For example, Applicants anticipate that legacy NS dispatchers and operators will continue to be trained on NS operating rules as long as those rules remain enforced within the combined railroad.

Applicants expect that in the first year, UP/NS will phase in training on UP operating rules and operating systems for legacy NS employees to ensure a smooth transition by legacy NS operations to legacy UP rules and systems that are adopted system-wide. This effort to gradually train legacy NS employees on GCOR will support the anticipated adoption of GCOR as the systemwide standard, except in areas where NORAC is in place (certain lines where NS is a tenant railroad and the host uses NORAC). The shift to GCOR is described in more detail in the Operating Rules integration section below. Applicants expect that each primary legacy NS location will have Local Onboarding Coordinators assigned to serve as training resources to support business process changes related to system implementations and to assist in educating the workforce on the changes.

Applicants will also ensure field supervisors are properly trained and knowledgeable in operational testing program requirements pursuant to 49 C.F.R. § 217.9. To that end, Applicants plan to introduce to NS legacy employees UP's current

practice of requiring newer managers who are getting § 217.9 qualified for testing to, at minimum, assist a qualified tester with 20 tests before being deemed proficient in testing. In addition, Applicants plan to increase training time, including both classroom and OJT for new managers. Going forward, there will be between five to eight hours of classroom training, and up to six months of OJT for new managers.

Applicants expect that they will make appropriate regulatory submissions and obtain regulatory approval for training changes where required.

V. Operating Practices

A. Operating Rules

1. Operating Rules at UP

The UP Operating Practices team's goal is to ensure that UP operates safely and efficiently when moving on track equipment. The CSO leads the Operating Practices team and is responsible for assessing the safety of all proposed operational changes and conducting the ongoing review of existing practices. The General Director of Operating Practices reports directly to the CSO and is responsible for evaluating every operating process for regulatory compliance and safety. Responsibility for operating rules and practices also rests with other members of the Operating Practices team, including the Director of Operating Practices and Rules and the Senior Director of Safety, both of whom report to the General Director of Operating Practices.

The Director of Operating Practices and Rules is responsible for developing, implementing, and enforcing operating rules, timetables, timetable special instructions, and general orders. The Director of Operating Practices and Rules also

oversees UP's Random Inward Camera Audit Program, which utilizes state-of-the-art in-cab video and event recorder systems to monitor operations rule compliance.

The Senior Director of Safety oversees UP's Operational Testing Program (pursuant to 49 C.F.R. § 217.9), which has been filed with the FRA. Under this program, which is called COMMIT, UP conducts safety and efficiency tests to confirm that UP employees (agreement professionals or dispatchers) properly apply rules and procedures both within a controlled environment and under normal operating conditions. UP uses data from this testing to identify training needs, evaluate risk, and identify and assess methods to mitigate risk. Additionally, as part of safety testing and efficiency testing, managers provide constructive feedback to employees about their performance, including positive reinforcement for compliance, which fosters engagement between managers and employees. UP's headquarters-level team performs observational testing under the COMMIT program on an unpredictable and unannounced basis.

Managers document the performance results of the testing in UP's EQMS. If an employee fails a test, UP undertakes corrective measures to ensure proper understanding, which can range from coaching and counseling the employee, to disciplinary action for violation of rules. The General Director of Operating Practices, Senior Director of Safety, and Director of Operating Practices and Rules all work closely with the Training Department to ensure the delivery of current and relevant safety information and interact with employees in the field to provide uniform interpretation of safety rules. Additionally, because the Operational Testing Program

focuses on real-world scenarios and conducting frequent evaluations, UP can identify areas for improvement and address potential risks before they escalate. The insights gained from these tests enable the company to refine its safety protocols, enhance employee training, and implement corrective actions swiftly. This proactive approach not only minimizes incidents but also cultivates a culture of safety awareness and accountability among employees.

UP's 14 senior managers of safety are assigned to service units throughout UP's network, with each senior manager of safety assigned to a service unit. These senior managers of safety are responsible for implementing and enforcing rules related to air brake and train handling, conductor and engineer certification, and remote-control operations, and ensuring completion of applicable training by employees within their respective service unit. Senior managers of safety report to the regional general director of safety responsible for their service region, and work closely with the general managers of UP's service units across the UP network. A centralized team at UP performs regular, monthly audits of the senior managers of safety to ensure that they are meeting their obligations and that employees within their respective districts are compliant with training requirements.

At UP, a centralized safety team performs annual § 217.9 audits of the quality of operational testing, including whether supervisors have adequate time to perform observations and assessments. Following the audits, general managers and personnel receive feedback on the results of the audits. If an audit reveals that a supervisor

does not have sufficient time to conduct adequate testing, UP adjusts the supervisor's schedule and responsibilities to allow for meaningful testing and field assessments.

UP utilizes various digital tools to both allow employees to report information and provide information to employees. For example, employees can report any safety concerns to UP's safety hotline online. These reports are promptly directed to the employees' managers and to the relevant departments for resolution. In addition, UP provides employees rulebooks on company-supplied electronic devices. Rulebooks also are available for download on employees' personal devices or are provided in hard copy. Employees are required to review system and subdivision general orders at the start of every shift for any updates since their last tour of duty. Employees can also elect to get email notifications when changes occur. Specifically, UP utilizes the following rulebooks and documents informing employees of timetables and special instructions in order to create a safe work environment and give employees the information that they need to remain compliant with federal regulations, operating rules, and safety rules:

- UPRR System Special Instructions, effective 11/19/2024
- Current applicable area timetable(s) for territories
- General Code of Operating Rules (GCOR), 8th Edition, effective 4/01/2020
- Train Dispatching Rules, effective 12/21/2018
- Air Brake and Train Handling Rules, effective 07/11/2023
- Maintenance of Way Rules, effective 05/02/2016
- Safety Rules, effective 05/10/2022

- Instructions for Handling Hazardous Materials, Form 8620, effective 11/19/2024
- Emergency Response Guidebook (2024)
- Track Welding, effective 05/02/2016
- Electrical Safety Rules, effective 07/01/2010
- Chief Engineer Instruction Bulletins effective 05/02/2016
- Superintendent Bulletins
- Subdivision general orders for each subdivision

UP continuously evaluates its rules and updates them as needed. When a rule is changed or added, the entire operating team is invited to a general order/rule review meeting to discuss the change in an open forum. If the majority of those present approve the rule, the rule is then sent to the CSO for final approval.

To reflect rule changes, UP updates its rulebooks through system general orders and subdivision general orders. UP groups system general orders by item number to align with UP's system special instructions. Specifically, UP's system special instructions consist of 24 items that are grouped into ten categories when updated by system general orders. The system general orders are categorized as follows:

- SSI 1 to 3 (1 Time Comparison; 2 Speed Restrictions and 3 Trains Handling Engineering Equipment)
- SSI 4 to 5-C (4 Locomotive Information and 5 Car Placement and Train Make-up Restrictions)
- SSI 6 to 9 (6 Maximum Gross Weight Limitations; 7 Employee Information; 8 Heavy and Mountain Grade Operations; and 9 Use of Engine Horns)

- SSI 10 to 10-B (10-A General Code of Operating Rules and 10-B Electronic Conveyance; Positive Train Control (PTC) Operations)
- SSI 10-C to 10-D (10-C Air Brake & Train Handling Rules and 10-D Maintenance of Way Rules)
- SSI 10-E to 10-G (10-E Safety Rules; 10-F Instructions for Inspecting, Welding and Grinding of Rail and Track Components; and 10-G Chief Engineer Instruction Bulletins)
- SSI 10-H to 10-M (10-H Hazardous Materials Instructions; 10-I Union Pacific Railroad Policies; 10-J Commuter Train Operations; 10-K Main Track Switches; 10-L Additional Equipment Securement Requirements; and 10-M Mechanical Department)
- SSI 11 to 17 (11 Moveable Point Frogs; 12 Track Breach Protection; 13 Train Defect Detectors; 14 Operating With Foreign Railroads; 15 Work Orders; 16 Tornado Watch and Warning Instructions; and 17 Accessing General Orders and Bulletins Electronically)
- SSI 18 to 22 (18 Distant Signals; 19 Block and Interlocking Signals; 20 Automatic Cab Signals; 21 Slide Warning Indicator; and 22 Roadway Signs)
- SSI 23 to 24 (23 Security Alert Instructions and 24 California Proposition 65 Warning)

Employees are required to review system and subdivision general orders at the start of every shift for any updates since their last tour of duty. If employees do not understand a rule or a change in rules, they can contact their supervisor or the Operating Practices Command Center (OPCC), which operates out of the Harriman Dispatch Center in Omaha, Nebraska and runs a 24/7 call center for train crews to obtain real-time answers to rules or other safety-related questions.

2. Operating Rules at NS

NS promulgates and follows its own operating rules—known as the Norfolk Southern Operating Rules—which are managed by the Safety and Operating Practices group in Atlanta, Georgia. These operating rules cover such topics as

attention to duty; safety critical rules; communications; signals; securement of equipment; movement of trains and engines; handling of switches and derails; switching operations; cab signal systems; PTC; operational adjustments for weather events; blue signal protection; and RWP.

NS continually updates its rules as necessary to keep its practices up to date and aligned with industry best safety practices. Rule changes may occur as a result of regulatory changes, best practices of other railroads, feedback from employees, and the observations of managers and supervisors. The Operating Rules Committee, a cross-departmental committee including Operations, Law, Human Resources (HR), and other stakeholders, meets and votes on potential new rules and appropriate support materials and training. The Chief Operating Officer has the final authority to approve a rule change.

To ensure all personnel remain aware of the current rules, NS employs a change management process which requires:

- Supervisors to affirmatively validate their comprehension of the standard;
- Affected employees to validate their understanding of the standard through associated digital platforms (including Comply365, Railroad IQ, LMS/SuccessFactors);
- In-person engagement with craft personnel to update them on the change(s);
- A standard for direct field engagement in the operating environment to achieve a physical display of proficiency while discussing the change; and
- Performance Standard Engagement (PSE) operational rules testing to confirm understanding and compliance.

NS also uses its timetables and daily bulletins to provide updated operating instructions to employees on an as-needed basis.

NS now uses digital platforms extensively to disseminate information to operations personnel. All train and engine employees have access to the cloud-based Comply365 platform, where they can access rules, timetables, bulletins, special instructions, and other mission-critical documents relevant to safety. In addition, the NS Safety Hub is a mobile application that allows employees to report safety concerns; share ideas and suggestions for safety; record site audits/safety walkabouts; and record risk-based hazard analyses. Direct supervisors are responsible for quickly and appropriately addressing/remedying any concern or condition submitted via the Safety Hub, with escalation to higher levels of supervision occurring automatically should concerns/conditions age.

Field supervisors conduct PSE safety and operations tests, both of which are documented to ensure that testing is occurring according to NS's FRA-approved standards, and that employees are provided corrective measures if they fail. PSE feedback, coaching, and training is provided to employees real-time on site, with every test accompanied by a direct face-to-face engagement with the testing supervisor to reinforce positive observed behaviors and correct any observed deficiencies. NS also monitors inward facing cameras on a random basis to check compliance with various rules, including but not limited to following signals, inspection of passing trains at meeting points, and use of personal electronic devices.

The current tempo of these reviews is approximately 20 random tests per month system-wide.

In addition to the operating rules, NS System Operating Manuals include equipment operation and handling; safety & general conduct; vehicle operation; and hazmat rules. The equipment operation and handling material includes information regarding air brakes; electronically controlled pneumatic brakes; freight cars; locomotives including towed or inoperative locomotives; distributed power operations; and remote control locomotives (RCLs). The safety & general conduct material covers such topics as PPE; getting on or off equipment; working on locomotives, cars, and trains; operating hand brakes; operating hand-throw switches; working on poles, structures, ladders, and scaffolding; using shop tractors, trucks, trailers and forklifts; welding; electrical work; working in manholes, tanks and excavations; office safety; first aid; and the drug and alcohol program. Vehicle operation rules cover the operation, inspection, and maintenance of highway vehicles. Finally, the hazmat material covers regulatory requirements; documentation; reporting marks and placards; and car inspection and emergency response associated with the transport of hazardous materials.

Although NS has its own operating rules, the railroad also participates in the GCOR meetings to benchmark and ensure industry alignment. Members of NS's operating rules team attend GCOR committee meetings. Indeed, NS operating rules are similar to GCOR in organization and content, with both rule sets rooted in the requirements of federal regulations. NS has engaged in benchmarking and reviewing

best practices, which at times has led to similar rules language between NS and GCOR.

Similarly, the NORAC is relevant to signals NS interacts with in its Northern Region and on the Conrail Shared Assets territories. Therefore, NS participates in NORAC meetings and has a vote on any rules changes.

3. Integration Plan

Applicants anticipate that the UP and NS operating practices governance and related rulebook information will remain separate during the early stages of safety integration. Applicants then expect to utilize GCOR—currently in effect on UP and most of the railroads operating in the U.S. today—as the core of the operating rules of the consolidated railroad. UP's and NS's safety and operating departments have engaged in discussions regarding their respective current operating rules and the adoption of GCOR across the consolidated railroad and their plans to complete a side-by-side analysis of all critical rules currently in place, which will aid in further integration planning and continuing review and comparison of all operating rules. That work will identify key similarities in certain critical rules that Applicants anticipate will aid in a successful transition to GCOR. Additionally, as noted above, NS's current operating rules are similar to GCOR in organization and content, which will aid in the transition to GCOR. Based on these preparatory and planning measures, Applicants anticipate that adopting GCOR will simplify operations within UP/NS and improve the safety of operations between the consolidated railroad and connecting carriers.

Applicants expect that following the integration UP/NS will continue its comprehensive review of all other operating rules and practices. This review would encompass air brake and train handling, train dispatcher rules, system timetables and special instructions, hazardous materials, and the other rulebooks listed above. Applicants expect that the review will also include continued discussion of and focus on optimizing the communication of rule and policy changes to employees, to ensure that all employees of the combined UP/NS are familiar with any new rules or practices. Applicants expect that, to ensure proper communication and efficient integration, the legacy UP Operating Practices and Rules team (consisting of the Director of Operating Practices and Rules and two direct reports) will work closely with the UP/NS Training Department team to help ensure that chosen rule sets and training programs are properly aligned. Affected employees will receive appropriate training on the adopted rules.

Applicants anticipate that once the comprehensive review is complete, UP/NS will begin implementation of a uniform set of operating rules and practices across the combined company. Integration will involve UP's "train the trainer" approach, to ensure that training professionals are amply prepared to train employees of the combined railroad on adopted rules. With respect to GCOR, UP's existing curriculum for upskilling UP trainers will be well-suited for NS trainers as well. Using UP's proven train-the-trainer curriculum will help ensure that the entire UP/NS Training Department is well prepared to train legacy NS employees on GCOR.

As already noted, UP and NS will continue to use current processes and remain certified under existing programs for an initial period. Applicants anticipate that NS legacy employees will continue to follow NS operating rules and testing programs and conduct their own operational testing until NS legacy employees are adequately trained on GCOR and UP's efficiency testing program, at which point legacy NS employees will become subject to UP's certification and licensing program. The combined railroad will adopt UP's continuing training schedule. Accordingly, once integrated UP/NS employees will receive required refresher training and undergo examination on the COMMIT program on an annual basis. This will increase the frequency of refresher training for legacy NS employees from once every three years to once annually.

Applicants intend to implement a standard format for the communication of rule changes across the newly formed company. Applicants anticipate that to accomplish this, UP/NS will draw on and potentially further enhance the processes used by each railroad to update, modify, or otherwise communicate operating rules and practices information to employees. UP/NS's review will include technology assessments such as potentially extending NS's cloud-based Comply365 platform to the combined system.

Applicants intend that UP/NS will monitor rules performance throughout the integration process and will adjust as necessary to ensure safe operations. Applicants anticipate that, following the integration, the legacy UP and NS systems each will retain their established Operational Testing Program in the near term, until the two

programs can be integrated. During this time, an expert in NS's PSE program and safety rules will sit on UP/NS's Safety Committee to ensure and monitor continuing, compliant operation of the PSE program. Subject to additional review and identification of best practices, Applicants anticipate that the combined railroad will adopt UP's COMMIT operational testing program. To prepare for that integration, UP will train legacy NS employees on the COMMIT program. Operational Testing programs will be integrated consistent with other integration decisions, such as those related to information systems and organizational structure. UP and NS intend to ensure that the integrated Operational Testing Program aligns with federal requirements and is filed with the FRA as required.

B. Alcohol and Drug

1. Alcohol and Drug Program at UP

UP is committed to the safety and health of its employees and the general public. This includes maintaining a safe and healthy work environment and complying with the FRA's drug and alcohol regulations and testing policy. UP's Drug and Alcohol Policy is based on the requirements of FRA's Control of Alcohol and Drug Use regulations, as set forth at 49 C.F.R. Part 219, as well as the Federal Motor Carrier Safety Administration regulations at 49 C.F.R. Part 382. The UP Drug and Alcohol Policy aims to provide an effective process for addressing the prohibited use of alcohol and drugs. The policy specifies what is prohibited, how tests are conducted, and what resources are available to employees experiencing alcohol and drug-related issues. The UP Drug and Alcohol Policy applies to all UP employees and is a condition of their employment. UP has a dedicated Drug and Alcohol Program section on its

employee website, where employees can access the policy and related resources. In addition, employees have access to a dedicated drug and alcohol information telephone hotline.

The Drug and Alcohol Testing Program at UP is managed by the company's Drug and Alcohol Testing team, which is comprised of a Designated Employer Representative (DER) and two assistant DERs. The team is part of the Health & Medical Services group within the HR Department. The Drug and Alcohol Testing team's curriculum includes documented processes and procedures for implementing the policy, training courses, and regulation review. Training involves in-person review of processes, policies, and procedures to develop program knowledge; OJT; in-person class-based training on fundamentals; on-line webinars regarding industry specific topics; and annual roundtables to develop the team's further understanding of the policy and regulations.

a. Prohibited Use of Alcohol and Drugs

Except as provided in 49 C.F.R. § 219.103, UP prohibits any possession, use of, or impairment by alcohol when any employee is subject to duty, reporting for duty, on duty, or on UP property. A confirmed breath or blood alcohol level of 0.02 or higher is considered prohibited use under the UP Drug and Alcohol Policy. In accordance with 49 C.F.R. § 219.103, UP employees are not prohibited from using a controlled substance prescribed or authorized by a medical practitioner, so long as such medical practitioner has made a good faith judgment, with notice of the employee's duties, that use of such substance by the employee at the prescribed or authorized dosage level is safe and consistent with the employee's safe performance of their duties.

However, UP may place restrictions on the use of specific types of prescription or over-the-counter drugs if such drugs pose a significant safety risk for work. UP prohibits any use of "medical marijuana" or synthetic/designer drugs. All UP employees using a permitted controlled substance must have a written copy of their treating medical practitioner's evaluation available upon request of the UP Medical Review Officer (MRO) or the fitness for duty nurse.

b. Drug and Alcohol Testing

In accordance with federal regulations, UP performs drug and alcohol testing of regulated service personnel, employees required to be tested by Federal law, and random testing of certain agreement and non-agreement employees as set forth in UP's Drug and Alcohol Policy. UP requires employees to submit to the following tests when appropriate:

- Urine drug screens required by the Department of Transportation (DOT), conducted in accordance with 49 C.F.R. Part 40. These tests screen for marijuana, cocaine, amphetamines, opioids, and phencyclidine (PCP).
- Urine drug screens not required by DOT but conducted by UP under its own authority. These tests also follow 49 C.F.R. Part 40, where applicable.
- Breath tests for detecting alcohol. DOT-required testing as well as tests conducted under UP's authority are administered in accordance with 49 C.F.R. Part 40.
- Blood or urine testing after accidents or incidents described in 49 C.F.R. § 219.201. Tissue testing is also conducted if such an accident or incident involves a fatality.

Under UP's Alcohol and Drug Policy, all employees are subject to the drug and alcohol testing in the following circumstances, among others:

Pre-Employment Testing. Before first-time applicants perform any service for UP, they must undergo drug testing and obtain a negative result. Applicants with positive test results will have their application rejected and will be deemed ineligible for rehire, unless they present a certificate of rehabilitation from a substance abuse professional.

Post-Accident Toxicological Testing. Post-accident toxicological testing may be conducted after any accident or incident. In accordance with 49 C.F.R. § 219.201, post-accident toxicological testing is always conducted in the event of a major train accident or impact accident.

Reasonable Suspicion Testing. Reasonable suspicion testing is conducted when an employee shows the signs and symptoms of drug or alcohol use.

Reasonable Cause Testing. Reasonable cause tests are conducted when there is a violation of an operating or safety rule that has the potential to cause, or actually causes, injury or damage.

Random Alcohol and Drug Testing. Random tests are conducted when employees are on duty. Follow-up tests may be conducted any time the employees are on duty or subject to duty.

All drug and alcohol testing results are reviewed by a qualified MRO. In the event of a positive test result, the MRO will make a reasonable effort to contact the employee tested and provide them an opportunity to discuss the result. If the MRO verifies the test result as positive, the MRO will notify the employee of the positive result and that it will be reported to their employer. The General Director of Health

Services and the Drug and Alcohol Manager also receive the test results and, with the MRO, help inform the employee's supervisor and other relevant personnel (such as operations support) of the test results. Employees who test positive for drugs or alcohol are immediately removed from service.

Employees who refuse a drug or alcohol test are prohibited from working any covered service job for at least nine months, and up to five years, or may be permanently dismissed.

c. Substance-Related Legal Offenses

All UP employees are required to report any arrest, ticket, citation, or conviction relating to a drug or alcohol-related offense, including unlawful use, possession, manufacture, distribution, dispensation, or transportation of any illegal drug or controlled substance. Additionally, a regulated employee, a Commercial Driver's License-qualified employee, or an employee who operates a company fleet vehicle must notify their supervisor and the UP National Employee Assistance Program (EAP) Helpline within 48 hours of an arrest, ticket, citation and/or conviction for driving under the influence.

d. Discipline

Employees who violate UP's Drug and Alcohol Policy are removed from service and subject to discipline, up to and including dismissal. An employee who has been dismissed for a violation of the UP Drug and Alcohol Policy is generally permitted a one-time return to service following successful completion of a rehabilitation program, as outlined in either UP's Drug and Alcohol Policy or, if applicable, the relevant labor organization's "Companion Agreement," which also provides for the

opportunity to return to service. In order to return to service, the employee must test negative on a return-to-duty test for drugs and alcohol and must enter a follow-up testing program. Employees are not permitted to take advantage of the one-time return to service if the dismissal was for the employee's refusal to test, if the employee had a previous violation of the UP Drug and Alcohol Policy in the previous 10 years, or if a significant rule violation triggered the positive test that led to the dismissal.

e. Employee Resources

UP supports its commitment to maintaining a safe and healthy work environment for its employees through its EAP and Operation RedBlock/Peer Support (ORB/PS) programs. EAP provides 24/7/365, confidential, professional support services and resources to its employees and their immediate family members to help effectively manage and overcome situations that may affect their mental health, emotional well-being, or job performance, including substance misuse. The ORB/PS programs were established as peer-to-peer resources designed to assist employees involved in critical incidents or those experiencing substance misuse by connecting them to available support services. These integrated programs share the common goal of promoting safety and employee engagement through peer-to-peer support, including by providing education and raising awareness about substance misuse; connecting individuals confidentially to necessary support services, helping them achieve healthier, substance-free lifestyles; and allowing employees to "Mark Off" and call off duty if impaired by alcohol or drugs, ensuring the safety of both their jobs and their co-workers.

2. Alcohol and Drug Program at NS

NS's utmost concern is the safety and health of its employees and the safety of its operations. For that reason, NS has a zero-tolerance policy for the use, or being under the influence of, drugs or alcohol while on duty or subject to call for duty. This policy applies to all employees. For employees that are FRA-regulated or Federal Motor Carrier Safety Administration-regulated, the policy prohibits the use of illegal substances at any time (on or off duty), except as allowed by 49 C.F.R. § 219.103.

NS's DER manages NS's Federal and Company-regulated Drug and Alcohol Programs. There are numerous situations when Federal drug and/or alcohol tests must be—and are—administered for the railroad to be in compliance with 49 C.F.R. Part 219 and Part 40, including:

- Pre-employment testing (49 C.F.R. Part 219, Subpart F);
- Reasonable suspicion testing (49 C.F.R. Part 219, Subpart D);
- Reasonable cause testing (49 C.F.R. Part 219, Subpart E) (NS performs federal reasonable cause testing when applicable);
- Post-accident testing (49 C.F.R. Part 219, Subpart C);
- Random testing (49 C.F.R. Part 219, Subpart G); and
- Return to duty and follow-up testing (49 C.F.R. Part 40, Subpart O).

Supervisors responsible for regulated employees are trained in the signs and symptoms of alcohol and drug influence, intoxication, and misuse, and how to properly identify such circumstances, and in the determination of whether or not an accident or incident meets the qualifying criteria for post-accident toxicological

testing contained in 49 C.F.R. Part 219, Subpart C. Training methods are both computer-based and instructor-led programs.

NS has a published Drug and Alcohol plan that describes policies and protocols in the event of a positive test result. If, for example, an employee tests positive for alcohol, immediate action will be taken to remove or restrict the employee. Employees are then subject to discipline, including potential termination.

NS has developed and published educational materials, specifically designed for regulated employees, that clearly explain the requirements of 49 C.F.R. § 219.23. Each regulated employee receives information concerning the available methods of intervening when an alcohol or controlled substance problem is suspected. This information is accessible to each employee through NS's intranet site, MyNS, and upon hire. Additionally, resources and programs are available to any employee who is affected by an alcohol or substance use problem. NS employees have access to a Drug and Alcohol Rehabilitation Services EAP, administered by Wellbeing Advocates. The EAP makes available confidential services for NS employees and qualified family members suffering from substance abuse disorders. The program is covered under NS's medical plan.

NS's internal policies encourage employees to self-report alcohol and drug abuse problems, and to report employees who appear to be unsafe to work with due to the possible use or misuse of prohibited drugs and/or alcohol.

3. Integration Plan

For a period following the integration, the legacy UP and NS Drug and Alcohol Programs will continue to operate independently. Applicants plan to fully integrate

NS into UP's robust Drug and Alcohol Program. As part of this integration plan, Applicants expect that UP's Drug and Alcohol Program management team will perform a full review of both companies' programs to determine the best course for integrating legacy NS employees into the legacy UP program. Applicants anticipate that UP/NS will provide regulated service personnel with training on the legacy UP programs that are carried forward to the combined company and applicable regulations. The timeline for the integration of UP/NS's Drug and Alcohol Programs is contingent on other integration plans, including integration of the HR Departments and relevant information systems.

C. Qualification and Certification of Locomotive Engineers and Conductors

1. Qualification and Certification at UP

UP, like all railroads, must adhere to safety standards for the eligibility, qualification, familiarization, and certification of employees who will serve as locomotive engineers and conductors. Through its rigorous Certification, Qualification, and Familiarization (CQF) programs, UP works to ensure that all locomotive engineers and conductors perform their work safely. This section describes the minimum standards for CQF of locomotive engineers and conductors, although as described in Section IV (Training), the actual training provided by UP may exceed these minimum requirements.

a. For Locomotive Engineers

UP's General Director of Operating Practices is the program administrator of UP's 49 C.F.R. Part 240 program. The FRA prescribes minimum safety standards for

eligibility, training, testing, certification, and monitoring of locomotive engineers to ensure that only qualified persons operate a locomotive or train. UP has submitted to the FRA, and the FRA has approved, a comprehensive program that meets or exceeds each minimum FRA standard.

UP employees receive training materials via multiple modules. The first, a classroom portion, provides general training and certification. Subsequent OJT is more specialized, and qualifies each employee to work on their specific routes. In more complicated territories, UP's combination of classroom and OJT allows for up to 28 weeks of total training.

With respect to people who are not previously certified, the Student Engineer Training Program is designed to run for a minimum duration of up to 16 weeks not to exceed six months predicated on the number of territories the student may need to qualify. During this program, classroom training comprises a minimum of 35 days, and OJT comprises a minimum of nine additional weeks. During classroom training, candidates are required to pass exams and simulator evaluations with a score of 85 percent or higher. During OJT, candidates receive a minimum of two evaluations from a DSLE. During the students' OJT, the student must perform all the critical tasks contained in UP's Proficiency Checklist before being allowed to receive their final performance evaluation. The final performance evaluation is performed by the DSLE and must be a minimum duration of four hours or 50 miles. The candidate must achieve a minimum passing score of 80 percent.

RCOs receive a minimum of 120 hours of training to be certified. This consists of 10 days of classroom and five days of OJT. Each candidate must pass a final exam with a score of 85 percent or higher. During OJT, the student must perform all the critical tasks contained in UP's Proficiency Checklist before being allowed to receive their final performance evaluation. The final performance evaluation is administered by a DSRCO. The final evaluation duration for demonstrating proficiency to the DSRCO must be a minimum of two hours when operating a physical locomotive and four hours when performed on a simulator.

To ensure certified locomotive engineers and RCOs maintain the knowledge necessary to perform their duties during each 36-month certification cycle, these employees receive continuing education as part of their recertification process. UP's continuing education program incorporates various training and qualification tools and methodologies, such as the use of interactive videos, simulators, and CBT, among others. The program also covers any significant operational changes since an employee's last training, such as changes in PTC, revised rules, operating practices, or the introduction of new technology. Recertification requires classroom training and passing a 100-question written exam with a score of 85 percent or higher. Individuals who fail to score 85 percent or higher will receive additional training and will have the opportunity to test again.

UP may rely on certification determinations made by another railroad, provided that the certification is still valid and for the same type of service, and certain knowledge, skills, and training criteria are met.

Designated supervisors must be a certified train service engineer and/or RCO and have experience as a railroad supervisor in train operations or demonstrate supervisory capability to railroad management. Designated supervisors must demonstrate the ability to test and evaluate the knowledge and skill of train service engineers and/or RCOs. Designated supervisors demonstrate this ability by (1) demonstrating data analysis skills on event recorders in the form of "teaching back" to the course instructor as if teaching the class while the instructor checks for understanding and corrects any errors, and (2) assisting a qualified operational testing manager with testing in order to demonstrate their operational testing skills in the field.

Each calendar year:

- A DSLE will monitor each train service engineer's or locomotive service engineer's performance by riding on an actual train/locomotive, observing performance utilizing virtual ride-along tools on an actual train/locomotive, observing the train service engineer or locomotive service engineer while operating a model TS-2 simulator, or reviewing results of an electronic event recorder.

- A DSRCO will directly observe RCO's performance while operating remote equipment, review results of an electronic event recorder, or observe the RCO while operating a simulator. When utilizing a simulator, a field observation to determine the RCO can safely operate the RCL under actual field operating conditions must be performed within the same calendar year, and when a simulator is utilized for the purposes of recertification the observation must be performed before a certificate is issued.

The curriculum for designated supervisors includes air brake rules, event recorders, train handling, fuel conservation (DSLE only), simulator training, operating rules, engineer certification, RCO certification, efficiency testing, derailment analysis, and applicable computer/web systems.

Designated supervisors are required to take a CBT course consisting of not less than 20 knowledge check questions regarding the UP-engineer certification program under 49 C.F.R. Part 240. The DSLE must also take and pass a physical characteristics test of not less than 10 questions covering the territories in which qualifying engineers and RCOs supervised by the designated supervisor operate. All DSRCOs and DSLEs receive continuing education on at least a triennial basis and must maintain their yearly qualifications over the territory they supervise.

b. For Conductors

UP's General Director of Operating Practices administers UP's 49 C.F.R. Part 242 program. This federal regulation prescribes minimum safety standards for eligibility, training, testing, certification, and monitoring to ensure that only persons who meet minimum federal standards serve as conductors. UP has submitted a comprehensive 49 C.F.R. Part 242 program to the FRA, which the FRA has approved, and this program meets or exceeds each minimum FRA standard. The new hire conductor program is designed to run for up to eight weeks, consisting of four weeks of classroom training and four weeks of OJT. More specifically, the program involves:

- Two weeks of classroom training (anticipated 80 hours);
- Two weeks of OJT with a qualified instructor (anticipated 80 hours);
- Two weeks of classroom training (anticipated 80 hours, in addition to the two weeks listed above); and
- Two weeks of OJT with a qualified instructor for territory familiarization.

During OJT, the student must perform all the critical tasks contained in UP's Proficiency checklist before a certificate can be issued. UP requires student

conductors to complete rules exams and achieve a passing score of 85 percent or higher. Six weeks of additional RCL training are offered based on territory needs, as part of the 49 C.F.R. Part 240 program discussed above.

UP provides continuing education for certified conductors during each 36-month certification cycle to ensure these employees maintain the knowledge necessary to perform their duties. Conductors are required to demonstrate their knowledge by the successful completion of a triennial written examination by achieving a score of 85 percent or higher prior to certification or recertification. Attendance for the classroom training is mandatory and consists of an anticipated 10 hours, including the examination. These comprehensive operating rules and practices training classes—which may be on-site or virtual—contain, at a minimum, the following subjects and estimated number of exam questions:

- Safety, operating, air brake/train handling, and applicable federal regulations, anticipated five hours and 100 to 150 questions;
- Physical characteristics (territory specific), anticipated one hour and 10 or more questions;
- Hazardous materials anticipated two hours, and 15 to 25 questions; and
- Use of any job aid that a railroad may provide to a conductor, anticipated two hours.

Certified conductors must satisfy territory qualifications before they can operate over such territory, except as outlined in 49 C.F.R. § 242.301(e). The conductor will be tested on the operating instructions and physical characteristics pertaining to track speeds, methods of operation, timetable special instructions, and any other characteristics of that territory. The number of familiarization trip(s)

necessary will be based upon the complexity of the territory, with a minimum of one round trip required.

UP may rely on certification determinations made by another railroad provided that the certification is still valid and for the same type of service, and certain knowledge and training criteria are met.

2. Qualification and Certification at NS

As noted above in the section on training, NS has robust and FRA-compliant training for engineers and conductors.

a. For Locomotive Engineers

Qualification and certification of engineers is governed by 49 C.F.R. Part 240 of the FRA's rules. NS has submitted to the FRA, and the FRA has approved, a comprehensive program that meets and often exceeds each minimum FRA standard. In addition to covering FRA regulations, engineer training focuses on train handling skills. The Director Technical Training and the System General Road Foreman of Engines (RFE) administer NS's Part 240 program. The Director Technical Training oversees initial classroom and OJT and provides testing and initial qualifications. The RFE oversees recurrent testing and qualifications.

NS's student locomotive engineer program is organized into two phases that contribute to the overall development of participants. Phase I consists of three weeks of structured training where trainees are exposed to and tested on the essential knowledge, skills, and abilities required for a locomotive engineer to perform safely.

To reach trainees with varying preferred learning styles, the course content is delivered through multiple methods including lecture-based presentations, hands-on

demonstrations and practice, eLearning, simulation, and role playing/intentional practice. Course content is divided into three broad modules of locomotive operations and testing, train handling, and operating rules.

Locomotive simulators are used during Phase 1 training to further train and assess student proficiency. Trainees complete approximately 27 hours of instructor monitored simulation training using 12 Type II full size simulators at the training center.

Phase I also includes three proctored exams, given throughout classroom training to assess knowledge. These exams include simulator, knowledge, and signal exams, each requiring a minimum passing score of 80 percent, with the exception of the signal exam which requires 100 percent. Scoring parameters for the simulator exam are based on time and fuel consumption, proper train handling, and critical areas such as speed compliance.

Phase II consists of a minimum of 16 weeks of OJT, where trainees are provided opportunities to apply the knowledge and skills gained during the previous phase under the guidance of a qualified locomotive engineer. Each trainee is provided with opportunities to work a variety of assignments on the territory over which they are qualifying. As applicable for each location, this includes yard, industry local, and road assignments. OJT is overseen by a supervising RFE at the local level and includes a required proficiency checklist.

Student engineers take initial certification rides evaluated by an RFE or qualified DSLE. Certification is awarded only after a student fulfills all requirements in 49 C.F.R. Part 240 (Initial Certification of Locomotive Engineers).

RCL operators receive a minimum of 40 hours of classroom training and a minimum of 40 hours of OJT, which includes exams. Students complete both classroom and field testing and are evaluated to ensure performance standards are met. The RCO training program provides instruction and application on topics covering locomotive basics, train handling and operation, preparing and inspecting locomotives, braking systems, power brake law, and troubleshooting defects. Candidates must achieve a minimum passing score of 80 percent on final exams. RCL operators are also reviewed annually by a DSRCO to maintain their certification.

Continuing education is provided to locomotive engineers and RCOs during each 36-month certification cycle to ensure these employees maintain the knowledge necessary to perform their duties. Recertification requires classroom training and passage of a written exam with a score of 80 percent or higher. Engineers and RCOs are evaluated triennially prior to certification.

NS requires that DSLE candidates considered for designation as a DSLE must either have appropriate experience as a locomotive engineer or have successfully completed a course of study (locomotive engineer training) and have been certified as an engineer as directed by 49 C.F.R. § 240.105. Each candidate considered for designation as a DSRCO must either have appropriate experience as an RCO or have successfully completed a course of study (RCO training) and have been certified as an

RCO as directed by 49 C.F.R. § 240.105. Both designations require the employee to maintain yearly qualifications over the territory they supervise and require continuing education on an annual basis. Prior to being designated as a DSLE or DSRCO, each candidate will also receive training covering topics such as requirements under 49 C.F.R. Part 240, effective coaching strategies, and how to perform periodic monitoring/check ride duties.

b. For Conductors

Qualification and certification of conductors is governed by 49 C.F.R. Part 242 of the FRA's rules. NS has submitted a comprehensive program to the FRA, which the FRA has approved, and this program meets and often exceeds each minimum FRA standard. As with engineers, NS's Part 242 program is administered by the Director Technical Training—for initial classroom training, OJT, and qualifications/certifications—and the RFE for recurrent testing and ongoing qualifications.

New hire conductor candidates begin with classroom instruction covering the full scope of conductor responsibilities and expectations, which are broken into five broad modules: railroad basics, freight car and locomotive inspection and testing, operating rules, switching, and train operations. These topics encompass all aspects of the Part 242 regulations. Successful students graduate with a Class 8 conductor certificate.

In 2024, NS had an 18-to-1 student-instructor ratio. The new hire conductor program is completed within two phases during a five-week training program, delivered through a blend of instructor-led, eLearning, hands-on, and multimedia at

the training center, followed by OJT, that varies in length based on the complexity of the hire location.

Phase I lasts five weeks, during which trainees are exposed to and tested on essential knowledge, skills, and abilities required for a conductor to perform duties safely.

Phase II is a minimum of seven to 28 weeks spent in the field environment with periodic classroom training interspersed throughout. Included is a blend of reinforcement training of previously covered content, operating trends, monthly safety topics, safety alerts, local operations, and OJT under the supervision of field safety supervisors, local operations supervision, and craft mentors. NS employs two types of peer trainers: craft trainers (experienced conductors that travel to the training center to facilitate hands-on exercises) and craft mentors (experienced conductors providing localized instruction and support at each hiring site).

OJT duration varies based on complexity of a trainee's territory. Part of the purpose of OJT held at the employee's location is to help employees understand local nuances and business practices, especially in larger territories that require more exploration and strategic planning. Additionally, some territories may demand specialized knowledge due to unique characteristics, such as industry regulations or specialized physical operating constraints.

Employees who have worked for NS in other capacities and have had previous training on NS's operating and safety rules may receive an abbreviated training

curriculum based on the evaluation of their proficiency by a qualified instructor. These employees must also complete certain certification requirements.

Continuing education is provided to certified conductors during each 36-month certification cycle to ensure these employees maintain the knowledge necessary to perform their duties. Recertification requires classroom training and passing a written exam with a passing score of 80 percent or higher.

3. Integration Plan

Applicants expect that during a transition period following the integration, the legacy UP and NS systems will each continue operating consistent with the above-referenced program submissions to the FRA regarding locomotive engineer and conductor qualifications and standards. Applicants expect that during this time the legacy UP engineer and conductor licensing team, part of the Operating Practices team in the Safety Department, will perform a thorough review of UP's and NS's 49 C.F.R. Part 240 and Part 242 programs. The timing of the review will likely depend on the integration efforts described in the Training and Operating Rules sections above, as each area has the potential to influence certification requirements of 49 C.F.R. Part 240 and Part 242. Applicants anticipate that UP's program will provide the basis for the integrated operative program of the combined railroad, and that where the programs differ, the combined network will adopt the stricter standards. Applicants expect that UP/NS will make appropriate submissions to the FRA to reflect any changes should there be a need after further review for consolidated filings or updates to the legacy UP program. Applicants expect that the combined railroad's certification practices will meet or exceed applicable regulatory

requirements and UP/NS will obtain FRA approvals where required to ensure full compliance with all applicable laws.

D. Hours of Service Laws

1. Hours of Service Laws at UP

UP takes the safety risk of fatigue seriously and has robust processes in place to help ensure that employees do not work more than the HOS limits. UP's operating rules require train crew, signal, and dispatcher employees to notify their supervisor if an HOS violation occurs, and an employee must not accept a call to work if they have not completed the federal mandatory rest period. HOS violations are reported to the FRA within 30 days after the calendar month in which a violation occurs, in accordance with 49 C.F.R. § 228.19. Additionally, UP has a Fatigue Risk Management Plan focused on managing and reducing fatigue risk for specific safety-related railroad employees in various functions. UP submitted its Fatigue Risk Management Plan to the FRA as required by 49 C.F.R. Part 270, and the FRA approved the Plan.

Train Crews. Train crew employee schedules follow work rules in the collective bargaining agreements (CBAs) and comply with federal regulatory HOS requirements. UP utilizes its proprietary Crew Management Timekeeping System (CMTS) platform to manage schedules for train crews and applicable yard controllers, in real-time and in compliance with federal regulatory HOS requirements. The relevant HOS information from CMTS is fed into UP's web-based HOS application. Together, the CMTS and HOS applications help ensure work schedules comply with HOS requirements and generate alerts that report when an employee has exceeded their HOS requirements. Train crew schedules are also managed by a dedicated Crew

Management team, who provide an additional layer of oversight to help ensure HOS violations do not occur.

Signals and Communication. Signal employee schedules, which follow the CBA and comply with federal regulatory HOS requirements, are housed in UP's scheduling platform, iTrakForce. Signal employees record their covered and non-covered service in the HOS application called Signal Hours of Service, which records information in compliance with 49 C.F.R. § 228.11(e).

Dispatchers. Dispatcher employee schedules comply with federal HOS requirements and are accessible to dispatchers through UP's Dispatcher Quality Measurement System. UP utilizes a proprietary platform called Dispatcher Manpower Management System (DMMS) to create train dispatcher schedules in real-time and in compliance with federal regulatory HOS requirements. DMMS works in conjunction with UP's Train Dispatcher HOS application, in which dispatchers record on-duty and off-duty information, in compliance with 49 C.F.R. § 228.11(d). Together, DMMS and the HOS application prevent HOS violations by providing front-end controls that help ensure work schedules comply with HOS requirements and back-end alerts that report when an employee has exceeded their HOS requirements. For example, DMMS will not allow a train dispatcher to be scheduled to perform covered service in excess of nine hours in a 24-hour period, in accordance with federal regulations. Train dispatcher schedules are also managed by UP's Train Dispatcher Workforce Planning Team, who provide an additional layer of oversight to ensure no HOS violations occur.

2. Hours of Service Laws at NS

NS complies with all federal HOS laws—which may be complemented by CBAs—and takes the safety risk of fatigue extremely seriously. As part of the federally required RRP, NS has developed and implemented a Fatigue Management Program under 49 C.F.R. Part 270 of the FRA's rules. The Fatigue Management Plan sets three goals:

1. Provide training to railroad employees to increase the understanding of fatigue and fatigue countermeasures and mitigations.

2. Identify the five job positions with the highest fatigue-related risk. Develop and implement mitigation strategies to reduce the risk associated with these positions.

3. Identify incidents with fatigue as a potential contributing factor. Develop and implement mitigation strategies applicable to associated operations or job categories, with an expectation of a reduction in the number of such incidents.

Some of the current practices in place to address fatigue include:

- Assigned Off Days: The majority of jobs now include designated off days and some jobs can delay a call to work if certain conditions are met.

- Pool Management: Job counts within pools are actively managed to maintain a balance and ensure employees work a full-time schedule but avoid being overworked.

- Technology Use: Inward-facing cameras in locomotives and company vehicles help support safety and fatigue awareness.

NS uses different tools to track the hours of different crafts and ensures compliance with the rules set forth in 49 C.F.R. Part 228. HOS reporting is managed by the department overseeing the craft to which the regulation applies, as described below.

Train Crews. NS documents, monitors, and reports train crew HOS compliance electronically using the "Crewcall" application that also digitally records train crew staffing, job assignments, calls for duty, and other crew management functionality that feed train and engine service payroll records. Records are updated in real time as they are created by reporting employees. The data from the system is pushed into NS's Teradata database several times per day, with automated reports generated on schedules to alert employees to potential HOS violations.

For train and engine personnel, HOS reporting is managed by the Crew Management office, overseen by the Senior Director Crew Management.

Signals and Communication. NS documents, monitors, and reports signalmen HOS compliance electronically using the internally developed "Hours of Service System" (HOSS), as well as digital dashboards that tie C&S assignment/work ticketing, payroll, and other data to HOSS records for HOS auditing and regulatory compliance confirmation. For these employees, HOS reporting is overseen by the Engineering-C&S Department, headed by the Assistant VP, Communications and Signals.

Dispatchers. NS documents, monitors, and reports dispatcher HOS compliance using paper records maintained within the Network Operations Center (NOC). NS is currently working to develop a digital HOS tracking solution integrated with the dispatcher payroll system. HOS are still tracked on hard copy documents, but they are electronically scanned and stored for historical reference. For

dispatchers, HOS reporting is overseen by the NOC, headed by the Assistant VP, Network Operations.

3. Integration Plan

For a period immediately following the merger, Applicants expect to maintain separate HOS programs. Applicants expect that, as part of the integration process, UP/NS will perform an evaluation of potential HOS plans, including a full review of both companies' programs, to move toward a single, unified HOS process. Applicants are committed to a careful, coordinated process to ensure that HOS integration occurs without disruption while maintaining compliance with applicable federal regulations and existing CBAs. Fatigue mitigation policies at both UP and NS will be harmonized to adopt a uniform approach. The timeline for the integration of UP/NS's HOS programs is contingent on other integration timelines, including those relating to information systems integration (Section XIV), training (Section IV), and operating practices (Section V). Subject to review and identification of best practices, Applicants currently anticipate that within two years of the merger, NS's train dispatchers will transition to UP's digital preventative HOS compliance program.

VI. Motive Power and Equipment

A. Motive Power and Equipment at UP

UP utilizes locomotive inspection and repair facilities across its network to perform regular inspections, maintenance, servicing, and repair of locomotives and rolling stock. UP ensures that all repairs comply with federal regulations and manufacturer warranty service agreements. These facilities are located throughout UP's network. The locations with more than 20 employees are listed in Table 3. For

each location, the table lists total employees and specifies how many employees are locomotive craftsmen and rail car craftsmen performing the inspection, maintenance, and repair work, and the non-agreement employees who oversee that work.

Table 3
UP Inspection and Repair Locations

Location	Employees			
	Locomotive	Rail Car	Non-Agreement	Total
Albina (Portland, OR)	14	26	5	45
Council Bluffs, IA	19	22	5	46
Commerce, CA	42	43	5	90
De Soto, MO		179	15	194
Denver, CO	21	1	1	23
Dolores (Carson, CA)	41		5	46
Dupo, IL	6	17	2	25
Englewood (Houston, TX)	53		8	61
Fort Worth, TX	176	45	23	244
Hinkle (Stanfield, OR)	57	15	6	78
Houston, TX	1	77	7	85
Kansas City, MO	32	14	4	50
Laredo, TX	25		1	26
Livonia, LA	50	42	7	99
North Little Rock, AR	375	62	41	478
North Platte, NE	404	162	52	618
Ogden, UT	3	18	3	24
Pine Bluff, AR	39	13	2	54
Pocatello, Idaho	11	42	4	57
Proviso (Melrose Park, IL)	120	39	13	172
Roseville, CA	147	37	16	200
Salt Lake, UT	13	8	2	23
San Antonio, TX	50	28	6	84
Santa Teresa, NM		28	2	30
Settegast (Houston, TX)	112		9	121
Stockton, CA	8	12	2	22
Tucson, AZ	11	24	2	37
West Colton, CA	195	44	24	263

Location	Employees			
	Locomotive	Rail Car	Non-Agreement	Total
Total	2,025	998	272	3,295

UP maintains owned and leased freight cars at locations across its network. Defective equipment identified en route is repaired at designated repair locations filed with the FRA as required by 49 C.F.R. Part 215.

Qualification standards for UP employees who inspect, maintain, or repair railroad freight or passenger cars and locomotive meet or exceed federal standards, and the applicable trainings and programs are described in detail above in Section IV (Training). UP's Mechanical Department currently has a 99.9 percent compliance rate for regulatory training requirements.

UP utilizes more than 1,000 hot wheel detectors (also referred to as wheel temperature detectors) to support its hot/cold wheel detector technology. This is the most of any Class I railroad. UP currently utilizes this technology, without an active FRA waiver, to identify freight cars with brake valves for air tests and associated repairs. UP's use of temperature detectors is more extensive than the temperature testing AAR criteria required for brake valves that are 13 years or older on unit trains in cold weather service. UP might seek a hot/cold wheel waiver from the FRA in the future under a consistent, standardized set of conditions.

When inspecting and auditing its rolling stock, UP also uses an outlier methodology to identify trains with higher-than-normal rates of undesired emergencies (UDEs). After the train is built and prior to departure, each train goes through a detailed inspection process, followed by monthly audits by the local

management teams to identify potential outliers. UP trains its mechanical teams in the conditions that could lead to such potential failures. Qualification standards for employees who inspect, maintain, or repair railroad cars and locomotives meet or exceed federal standards, and the applicable trainings and programs are described in greater detail in Section IV. This process, of inspecting and auditing trains for outlier conditions in addition to any federally mandated inspections, results in a significant reduction of UDE rates on these trains.

B. Motive Power and Equipment at NS

NS is dedicated to the safe maintenance of its locomotive and car fleet. NS's Mechanical Department performs locomotive maintenance and equipment repair at shops and yards across its network. NS has over 1,300 craft employees focused on locomotive inspection, maintenance, and repair. NS's mechanical shops with greater than 20 employees are summarized in Table 4 below. For each location, the table lists total employees and specifies how many employees are locomotive craftsmen and rail car craftsmen performing the inspection, maintenance, and repair work, and the non-agreement employees who oversee that work.

Table 4
NS Mechanical Locations with More than 20 Employees

Location	Employees			
	Locomotive	Rail Car	Non-Agreement	Total
Bellevue, OH	55	59	15	129
Birmingham, AL	64	65	15	144
Bluefield, WV	7	11	3	21
Chattanooga, TN	129	51	20	200
Chicago, IL (Calumet)	37	32	11	80
Cincinnati, OH	4	14	4	22
Cleveland, OH	4	15	2	21
Conway, PA	101	48	17	166
Decatur, IL	43	38	12	93
Detroit, MI	7	26	2	35
Elkhart, IN	66	65	16	147
Enola, PA	89	23	14	126
Ft. Wayne, IN	9	21	3	33
Inman (Atlanta, GA)	53	26	11	90
Juniata (Altoona, PA)	435	9	23	467
Kansas City, MO	14	8	2	24
Lamberts Point (Norfolk, VA)	14	38	7	59
Linwood, NC	5	17	1	23
Louisville, KY	10	21	2	33
Macon, GA	23	47	7	77
Portsmouth, OH	2	33	3	38
Shaffers (Roanoke, VA)	92	18	14	124
Sheffield, AL (Muscle Shoals, AL)	14	21	3	38
St. Louis, MO	4	16	2	22
Total	**1,281**	**722**	**209**	**2,212**

In addition to the mechanical work undertaken at NS's locomotive shops, it has mechanical personnel at over 15 other locations available for servicing or running repairs to minimize locomotive down time.

Qualification standards for NS employees who inspect, maintain, or repair railroad locomotives or freight cars meet or exceed federal standards, and the applicable trainings and programs are described in detail above in Section IV.B (Training).

In addition to following regular maintenance and service protocols for locomotives and rail cars, NS employs several incident reduction strategies. These include data-driven targeted inspections, improved use of wayside technology such as digital train inspection portals (leveraging machine vision artificial intelligence inspection technologies), and wheel integrity systems (sometimes called cracked wheel detection systems).

As of November 2025, NS has 10 machine vision portals at nine sites. These portals feature technology that was developed in cooperation with Georgia Tech Research Institute, and enable NS to perform digital train inspections. As trains pass through numerous 24-megapixel trackage cameras, the cameras capture thousands of ultra-high-resolution, 360 degree images of each train. These images can be captured even when trains are running at maximum authorized track speed. The images are analyzed within minutes by an artificial intelligence algorithm that can detect—and report—freight car defects almost immediately. The data is reported to the NOC, where it is reviewed by subject matter experts that can address any issues identified promptly and prior to any derailment or other issue. Currently, more than 75 percent of monthly NS traffic passes through these portals and is subject to these digital train inspections.

C. Integration Plan

Following the merger, Applicants will evaluate the mechanical needs of the combined network, during which time Applicants generally intend to continue maintenance operations at existing locations. This evaluation of mechanical needs will be based on operational flow, including ensuring that the combined network has adequate facilities and staff across the combined network to support the combined network's traffic. Applicants' evaluation will also ensure that the combined network complies with applicable regulatory requirements, including for example the requirements of 49 C.F.R. § 236.1015(d)(21).

As part of the integration, the combined UP and NS will consider any equipment differences. Given the similarities between UP's equipment and NS's equipment that would be serviced on a combined system, Applicants do not anticipate significant issues in this area. Applicants will evaluate the legacy NS machine vision systems and consider whether and how to integrate into the combined system, considering risk reduction, feasibility, and effectiveness in addressing derailment and equipment accident risks without a disproportionate increase in false positive indications.

Qualification standards for legacy mechanical and locomotive personnel will remain separate for a period following the combination, though Applicants expect that the combined railroad will ultimately adopt UP's qualification standards. To accomplish this, the combined UP and NS will perform a comprehensive review of qualification programs as described above in Section IV (Training). Employees will receive the training necessary to account for any differences in the previous

programs. The timelines associated with the adoption of UP's practices will depend on other integration timelines, including those relating to training and operating practices (Section V), as well as other integration work that might be prioritized based on anticipated safety impact.

VII. Signal and Train Control Systems

A. Signal and Train Control at UP

UP employs more than 27,438 miles of signalized track, including 23,268 total miles with CTC and 4,171 miles with Automatic Block Signals (ABS).

UP's signal system meets, and in some cases exceeds, all FRA, vendor, and industry best practices and requirements. UP's signal system includes wayside signals, train detection equipment, switch machines, electric locks, relay-based interlocking, vital microprocessors, interlocking, and wayside detectors. Signal equipment is generally compliant with American Railway Engineering and Maintenance-of-Way Association (AREMA) standards and recommendations. All signal systems are designed, installed, commissioned, and maintained in a manner that ensures compliance with UP's Yellow Book on signal maintenance and inspection, UP's Wayside Cutover Procedures Manual, and FRA regulations. The wiring of new signal equipment is completed by qualified staff internally and by third-party vendors. In addition, UP has a Signal Lab in Omaha, Nebraska, where the railroad tests and qualifies new signal equipment and technologies.

All signal engineering is performed by qualified individuals using industry best practices. UP leverages its in-house regulatory testing compliance tool, Signal Maintenance Planner, to ensure equipment is maintained at applicable standards

and intervals. Signal system reliability issues are managed by the Signal Maintenance Team. The Signal Maintenance Team tracks all system issues, and dispatches appropriate personnel to ensure all system failures are repaired. UP performs operational testing with signal employees focused on knowledge of and compliance with Yellow Book instructions via its COMMIT model. Training of signal and communications employees is described in Section IV (Training).

Wayside Detectors. To detect potential equipment defects on its locomotives and rolling stock UP utilizes wayside detectors throughout its network. UP's robust network of more than 7,000 wayside detection devices monitors the condition of rolling stock (freight cars and locomotives) in real time. These wayside detectors are electronic sensors installed along the tracks that measure strain, temperature, acoustic signature, and dimensions of various components such as bearings, wheels, trucks, and braking systems.

The various wayside detectors and their approximate quantity are identified in Table 5.

Table 5
UP Wayside Detectors

Detector Type	Quantity	Measure
Hot Box Detector (HBD)	1,730	Measures bearing temperature.
Hot Wheel Detector (HWD)	1,013	Measures wheel temperature.
Dragging Equipment Detectors (DED)	4,199	Identifies low hanging or dragging components/material as a train passes.
Wheel Impact Load Detector (WILD)	18	Measures vertical and lateral forces as equipment passes over.
Acoustic Bearing Detector (ABD)	7	Analyzes the acoustic signature of a wheel bearing that passes.
Wheel Profile Detector (WPD)	3	Measures the profile of each wheel as the train passes.
High/Wide Detectors	11	Monitors oversized or shifted loads.
Wheel Down Indicator	161	Monitors for derailed wheels.

UP conducts routine detector inspections, as well as monitors equipment performance via reporting available via UP's back-office systems.

Collectively, the wayside detection system generates more than 16 million data points daily, which UP uses to assess the condition of each locomotive and car, and to prioritize inspections, maintenance, and repairs. Based on the severity of the locomotive or car's condition, UP undertakes one of four responses (from most to least severe):

- Stop train (inspect, repair)
- Repair at next location
- Repair at planned maintenance event
- Monitor and track for trending

Timely and optimal responses to equipment conditions help address risk with minimal interruption to customer shipments. The equipment condition data is also

saved in UP's electronic systems, allowing for a coordinated response to necessary inspection and repair work. For example, repair and inspection information appears in work order systems so that certain conditions are addressed at maintenance events. Certain priority information is also sent to handheld mobile devices carried by rapid responders and train yard employees. The information also appears in UP's mechanical help desk systems for conditions requiring immediate train action. Finally, alerts and health summaries are shared with other railroads, railcar owners, and the AAR.

UP ensures that all FCC requirements for radio licensing are followed. UP uses its FCC-licensed frequencies for a variety of purposes, including voice communications and signal technology.

PTC. PTC is a system of technologies that continuously relays critical information such as speed limits, train movement authorization, switch positions, work zone locations, and other operational data. PTC reduces the risk of human error-caused incidents by warning the train crew first and then, if they do not respond, taking control to halt the train before an incident can occur.

UP has implemented Interoperable Electronic Train Management System (I-ETMS) for its PTC system. Since operating the first section of PTC on December 28, 2015, UP has invested approximately $2.9 billion to install this new technology on more than 17,000 route miles (90 percent of train miles) across 189 track segments. UP has equipped approximately 5,964 (~87 percent) of its locomotives with PTC. UP utilizes approximately 1116 servers, appliances, and databases to operate its PTC

system. UP also works to ensure that its tenant railroads are PTC-enabled and interoperable. UP's PTC Implementation Plan has been filed with and approved by the FRA.

PTC utilization is reported to the AAR and to the FRA. UP's PTC utilization rate in August 2025 was 99.1 percent. UP conducts ongoing monitoring and maintenance of its PTC system to ensure maximum reliability and availability. Maintenance includes replacing hardware (onboard computers, antennae, radios), upgrading software, and updating the PTC database with new track equipment (signals, switches). PTC repair can be completed at UP's shop locations.

B. Signal and Train Control at NS

NS dispatches over 14,500 signalized track miles, 12,500 track miles with CTC, the vast majority of which is controlled wirelessly through NS's Interoperable Train Control Messaging communications network and associated infrastructure. 2,000 track miles of signalized track utilize ABS technology. Additionally, NS has approximately 586 track miles utilizing Cab Signal Systems.

NS's signal system meets and often exceeds FRA, vendor, and industry best practices and requirements. NS's signal system includes wayside signals, train detection equipment, power switch machines, electric locks, relay-based interlockings, vital microprocessor interlockings, and detector technologies of multiple types. All vital signal equipment is compliant with AREMA standards. The Training section above describes the training and qualifications of NS's signals and communications employees, each of which follow FRA rules and industry best

practices. NS performs routine inspection of its signal system equipment per FRA standards as well as NS internal maintenance practices and procedures.

Wayside Detectors. NS's network of wayside detectors is extremely valuable in detecting and preventing conditions that can lead to derailments and other safety incidents. Table 6 identifies the type of wayside detector NS has deployed, the approximate volume deployed, and the information each detector provides to enhance safety.

Table 6
NS Wayside Detectors

Detector Type	Quantity	Information Provided
Hot Box Detector (HBD)	1,184	Measures bearing temperature.
Hot Wheel Detector (HWD)	208	Measures wheel temperature.
Dragging Equipment Detector (DED)	1,229	Identifies low hanging or dragging components/material as a train passes.
Wheel Impact Load Detector (WILD)	25	Measure vertical and lateral forces as equipment passes over.
Acoustic Bearing Detector (ABD)	22	Analyzes the acoustic signature of a wheel bearing that passes.
Wheel Profile Detector (WPD)	19	Measures the profile of each wheel as the train passes.
Truck Geometry Detector (TGD)	20	Measures how a freight car truck and individual wheel sets are negotiating the track.
Clearance Detectors	56	Identifies passing equipment outside allowable thresholds for a route.

Wayside detectors are inspected on a routine basis, meeting or exceeding industry and vendor recommendations. That includes inspecting HBDs, HWDs, and DEDs every 30 days and clearance detectors every 90 days. NS's work with wayside detectors means it is sampling more rail cars to identify issues than ever before and

is identifying issues before they develop into more significant problems. Since early 2023, NS has significantly increased the number of HBDs across its system, reducing average spacing on core routes to approximately 11 miles, and absolute spacing to no more than 15.05 miles between detector sites or between a yard entry/exit point and a detector. NS also significantly increased the number of ABDs deployed across its network, all while pioneering the deployment of the industry-leading digital train inspection technology discussed above.

NS also has FCC-licensed radios. The communications team, reporting to the C&S group in the Engineering Department, maintains compliance with all FCC rules and regulations to ensure its ability to safely communicate across the network. The FCC-licensed frequencies are used for voice communication, remote locomotive operations where permitted in yards,[7] and data communication.

PTC. Like UP, NS has deployed the I-ETMS for its PTC system. NS maintains nine PTC back-office servers. It has 805 PTC-equipped locomotives in its yard and local fleet and 2,090 PTC-equipped locomotives in its road fleet. NS has also worked with tenant partners, where necessary, to ensure their locomotives are PTC-enabled and interoperable. NS has over 8,000 route miles in PTC operation across 142 line segments, as identified in NS's PTC Implementation Plan filed with and approved by the FRA.

[7] RCL operations are active at 22 locations across NS's network, including all six of its hump yards. In 2025, two summits were held across NS to standardize RCL operations.

NS's PTC protection rate is submitted to the AAR and is made available to the FRA on a quarterly basis through industry reporting. The PTC protection rate for August 2025 was 99.89 percent. To maintain high reliability and availability of its PTC system, NS conducts continuous monitoring and scheduled maintenance. These efforts include replacing and upgrading hardware components—such as onboard computers, antennas, and radios—implementing software updates, and revising the PTC track database to reflect infrastructure changes like new signals and switches. NS personnel proactively monitor operations and promptly address any issues when they arise. Reported incidents are managed through established incident management protocols, which include resolving enroute system failures when possible. Necessary repairs are carried out at any of the company's repair facilities.

C. Integration Plan

Applicants anticipate that, following the combination, UP/NS will continue operating with the signal and train control systems currently in place. Applicants expect that UP/NS will maintain this approach until the combined railroad completes a comprehensive review of assets and programs. In that review, members of UP's and NS's signal and operations teams will determine which processes, standards, and systems are most appropriate for the combined UP and NS. Once the most suitable systems, processes, and standards are identified, Applicants will develop a plan for the safe integration of these systems. Applicants anticipate that this plan will include milestones or checkpoints to determine progress and maintain a focus on safety during integration. Applicants also anticipate that the plan will include considerations for testing prior to implementation and back-up procedures to ensure

a safe and seamless operation. The plan will maintain compliance with all federal regulations.

Applicants also anticipate that the legacy UP and NS PTC back offices and systems will maintain their separate operations for a period following the combination, pending integration into a single PTC back-office system under a unified safety plan. The integration of PTC back offices will be conducted as part of UP/NS's overall IT systems integration plan. Additionally, Applicants will analyze whether any route changes require adjustments to PTC, and will install and implement PTC on additional track as necessary according to regulatory requirements.

During the transition period, UP/NS will meet with the FRA to help demonstrate that its plan complies with regulatory requirements. Relevant employees within the combined UP and NS will have access to all relevant regulatory compliance systems and safety systems, such as the HOS system, PTC, and Signal Maintenance Planner. In addition, the team will have access to applications that provide the health status of signals and communications systems, ensuring regulatory compliance and safe operations.

VIII. Track Safety Standards and Bridge Structures

A. Track Safety Standards and Bridge Structures at UP

1. Bridges and Structures

UP maintains policies and processes governing the inspection, maintenance, and construction of bridges, tunnels, and culverts. These are contained within UP's

Bridge Safety Management Program (BSMP), the Engineering Structures Maintenance Field Manual, and standard drawings.

In compliance with 49 C.F.R. § 237.33(a), UP maintains a complete inventory of structures. UP's Engineering Structures Management (ESM) System is an electronic database housing all pertinent data with respect to inventory, condition, and inspection records of all structures on the UP system. The ESM System supports UP's inspection system, which leads the industry in design and capability.

Certain structures, due to their geometry, location, or environment, require special equipment to perform a thorough and accurate inspection. Depending on the type of special equipment, some may require certifications, licensing, and proof of specialized training. Examples of special equipment could include drones, man-lifts, snooper trucks, and diving equipment such as sonar and remote operating underwater vehicles. In addition, use of this special equipment may require the services of certified professionals and coordination with local authorities. A detailed inspection of the more significant steel structures is completed by consultant licensed bridge engineers on a five-year frequency. UP has assigned personnel dedicated solely to structure inspections, which enhances the quality and consistency of the inspection process and subsequent findings.

UP employees performing bridge inspections receive bridge inspection certification training in accordance with Section 7.3 of the BSMP and are deemed competent to perform bridge inspections as railroad bridge inspectors (RBI) in accordance with 49 C.F.R. § 237.53. Structure specialists are deemed competent to

apply engineering principles to railroad bridges. They are identified as railroad bridge engineers in accordance with 49 C.F.R. § 237.51 when they have a degree in engineering at an institution accredited by ABET. Records of qualifications and designations of responsible persons are detailed in Section 2.0 of the BSMP. UP's training is discussed in greater detail in Section IV.

UP's inspection of structures meets or exceeds the regulatory inspection frequency requirements of 49 C.F.R. § 237.101. UP employs risk-based protocols to increase the frequency of inspections of bridges and structures, as necessary. Structures are assigned an inspection category based on specific criteria and each category has an assigned minimum frequency of inspection per the BSMP. An RBI inspects bridge and structure assets for any unusual conditions or changes since the asset's last inspection. Each defect found during an inspection is classified according to its priority (based on member function and defect location) and severity (considering nature and extent) of the defect in accordance with Table 7 and Section 7.18 of the BSMP. The classified defects are entered into UP's ESM System and subsequently transferred to the Bridge Maintenance Planner (BMP) and assigned a maintenance level (from one to nine). The Manager of Bridge Maintenance will then schedule repairs in the BMP based on this maintenance level and any other risks.

2. Track Infrastructure

UP maintains policies and processes governing the inspection and maintenance of track assets in a manner that meets or exceeds FRA regulations, as detailed in the UP Engineering Track Maintenance Handbook.

Visual Track inspection frequencies meet or exceed all required regulations. UP has protocols for additional special inspections in times of flooding, high heat, inclement weather, earthquakes, wildfires, and hurricanes. Additionally, each service unit has a contingency plan for winter weather, which contains instructions for special maintenance and operations planning.

UP records compliance with inspection frequencies and completed inspections in reports which are saved in its electronic system of record, the UP Track Inspection System. This allows UP management to track and review all inspections and allows for all defects to be recorded, monitored, and closed with remedial actions noted.

a. Weather Monitoring

UP constantly monitors weather conditions across its network. It utilizes forecast information from AccuWeather For Business to stop or re-route trains in the event of certain weather events in order to ensure UP's employees and communities remain safe. These forecasts alert UP's network superintendents in UP's Centralized Dispatching Centers in Omaha, Nebraska and Spring, Texas, to potential risks including potential storms, high winds, flash flooding, blizzards, heavy snow, heavy rain, and extreme high- and low-temperature swings. Through this system, UP's dispatchers receive real-time alerts and warnings and can make informed decisions for trains operating in high-risk weather areas, thereby avoiding safety risks to trains, employees, and communities, including weather related derailment risks. Local weather alerts are also sent directly to dispatchers through UP's CADX system. Engineering field employees that are assigned to locations and territories that are under a network-impacting weather alert receive notifications and are in direct

communication with dispatchers. When conditions warrant, special inspections, which are outlined in the UP Track Maintenance Field Handbook, may be initiated to protect train movements and allow for an immediate inspection of the track and infrastructure condition. Once engineering inspects the track and determines any appropriate weather-related restrictions, the track may be released back to the dispatcher for normal or restricted speed train movements or the track may be removed from service depending on the level of damage to the railroad.

Additionally, UP utilizes hotbox detectors, which are equipped with temperature sensors. The hotbox "talker" system notifies crews of local temperatures. UP utilizes data from wayside anemometers along with weather information from AccuWeather to evaluate wind blowover risk against the predefined limits for each car on a train, in order to slow or stop trains as necessary due to high winds.

Established procedures govern maximum train speeds during times of extreme temperatures, and also during periods of heavy snowfall. These procedures are contained in the system special instructions as well as in heat and cold orders distributed through CADX that are then included in train bulletins. Maximum train speeds are reflected in the timetables provided to dispatchers and train crews.

In regions that experience more intense winter weather, including areas prone to winter storms, UP utilizes winter preparedness policies and procedures that are designed to protect UP personnel and the communities in which UP operates. These policies provide detailed task lists for pre-storm action plans, during-the-storm response plans, and post-storm recovery plans.

b. Hurricane Response Protocol

UP's Gulf Coast & Houston Service Units have a Hurricane and Tropical Storm Action Plan, which is intended to minimize the potential consequences of a hurricane for UP personnel and property, as well as service in the event of a hurricane or tropical storm in the Gulf Coast. The protocol provides detailed, location and function-specific instructions for what to do in the days and hours leading up to a forecasted storm. It also provides detailed, function-specific instructions for what to do following a hurricane or tropical storm, including inspecting and clearing tracks, as needed, and restoring power to buildings and structures.

UP's AccuWeather for Business app and web portal includes detailed hurricane and tropical impact forecasts for the Atlantic and Pacific and these statements are also sent via email to employees as 'SkyGuard' alerts. This allows for advanced planning and preparation for conditions related to tropical storms and hurricanes such as high winds, power outages, flash flooding, and storm surges along coastal areas. The hurricane alerts will indicate the impacted subdivisions and milepost limits and updates will be issued as conditions change. Depending on the severity and forecasted impact of a given event, UP may activate a centralized command center to coordinate critical communications between all parties to provide updates on the storm as well as coordinate the response efforts. The goal is to perform all necessary inspections, stage all the necessary resources and materials, and protect the track and infrastructure so train movements can continue or resume once it is safe to do so.

c. Earthquake Response Protocol

UP's earthquake response protocol minimizes potential consequences of an earthquake on train operations by stopping or slowing rail traffic until the condition of the right-of-way can be assessed. The protocol includes notifying the relevant corridor managers, dispatchers, and maintenance personnel. Depending on the magnitude of the earthquake and the distance of the tracks from the earthquake's epicenter as well as the shake intensity model, which estimates potential damage to infrastructure, maintenance-of-way special inspectors must perform track inspections before trains can resume normal operations. These maintenance-of-way employees are trained to look for specific conditions that would make train movements unsafe after an earthquake event and will communicate back to dispatch any required restrictions within the impacted area, which is specified in the alert.

d. Track and Roadway Maintenance and Testing

From 2013 to 2023, UP's track-caused derailments fell by 55 percent. Nevertheless, to drive further improvements, since 2023 UP's Engineering Department has implemented a robust derailment prevention plan featuring new and improved technologies.

Advanced Anchors. UP's Advanced Anchoring Program uses Viper anchors, featuring a bent steel bar on the thinner axis to prevent rail movement. This design enhances strength, resists slipping in greater capacity than AREMA standards, and offers 75 percent more bearing surface than standard anchors in order to increase resistance to track movement. Viper anchors are reusable, like plates and spikes.

Launched in March 2025, this initiative resulted in the installation of these anchors across 83 miles of rail by the end of 2025 with continued plans for 100 miles in 2026.

Track Alignment - Reducing Track Movement During High Heat. UP is performing a pilot program in which it sprays white paint across tracks historically prone to thermal misalignments in order to reduce the rail temperature. Early results show a 10-degree reduction in rail temperature at the hottest point in the day, helping prevent potential heat-related misalignments and resulting derailments.

Material Distribution - Automated Tie Distribution. UP utilizes an Automated Wood Tie Unloader that autonomously distributes crossties, enhancing safety by minimizing physical contact and reducing UP's track and time footprint. UP's engineering and mechanical teams started developing this equipment in 2017 and continue to develop this technology. UP plans to deploy this technology across more of its network in 2026.

Scrap Material Recovery Team Tie Pickup. UP's Tie Pickup, performed by its Scrap Material Recovery Teams (SMRT), has introduced a new maintenance of way machine, the MW SMRT. This high-tech equipment can not only pick up ties, but also clear vegetation, collect scrap metal, and load cars with ballast, the rock used to stabilize tracks. Seven SMRT units are in service across UP's 23-state system. Four sets of equipment are dedicated to the Northern region, and three for the Southern region. These incredibly productive units allow UP to collect used ties quickly with a reduced on-track footprint.

Geometry Testing. UP continuously collects data to analyze its track geometry. In 2025, UP utilized two manned geometry cars (EC-4 and EC-5), three autonomous box cars, 12 systems installed on locomotives, and a small fleet of light duty test trucks to test approximately 580,000 miles of track. The collected geometry data is uploaded and analyzed to track the development of potential defects run over run, enabling UP to detect issues early and prioritize correction of track geometry defects.

Data Analytics. UP Engineering utilizes next generation data analytics and forecasting to determine the optimal time to intervene on potential track maintenance issues. By using trending over time UP can forecast when potential issues will become defects. Using these inputs, UP can determine the optimal time to install into the network new assets such as ties, rail, or ballast to minimize potential service interruptions. This data helps with derailment prevention, capital effectiveness, and asset utilization.

e. Training and Qualifications

For information about training and qualification standards, *see* Section IV.

B. Track Safety Standards and Bridge Structures at NS

1. Bridges and Structures

NS maintains policies and processes governing the inspection and maintenance of bridges, culverts, and tunnels. These are outlined in NS's Bridge Management Program. All structures are cataloged in NS's Bridge Information Management System (BIMS) electronic database. Some historic information is also housed in Helix Structures, an electronic database and inspection program used for

part of the NS system from January 2021 through May 2024. BIMS maintains current asset information and inspection programs for structures, including some maintenance information. Comprehensive maintenance information is stored electronically and associated with each structure.

Bridges are inspected annually unless conditions warrant more frequent inspection. Culverts are generally inspected bi-annually except culverts of specific types or that have had certain conditions codes applied to them, which make them subject to annual inspections. All tunnels are inspected annually or more frequently if conditions warrant. NS's inspection of structures meets or exceeds FRA regulatory inspection frequency requirements.

All proposed bridges and structures over which the Company's equipment will operate are designed in accordance with the AREMA Manual for Railway Engineering, Chapters 7 (Timber), 8 (Concrete), and 15 (Steel Structures). Prior to beginning construction, the proposed design is reviewed and approved by a railroad bridge engineer, as determined by the Company's Chief Engineer - Bridges and Structures.

2. Track Infrastructure

NS's Track Inspections meet or exceed all FRA requirements. NS employs over 150 supervisors of track inspection who oversee the inspection of the network and conduct visual track inspections in line with FRA and NS requirements. All inspection data is collected and assessed/audited internally.

NS continues to follow all FRA rules and regulations regarding visual track inspection,[8] and, beginning in 2019 NS has utilized Automated Track Geometry Measurement System (ATGMS), sometimes referred to as Automated Track Inspection Program. ATGMS is a locomotive-based package with passive detection that can actively measure the track while running up to maximum authorized track speed. The use of this technology provides extensive network coverage, and has no impact on operations. In 2025, NS used ATGMS to test the geometry of nearly 1.6 million miles of track.

3. Weather Monitoring

Weather is an important factor in track safety. Inclement weather has the potential to have physical impacts on the track and may also lead to washouts. NS has developed robust operational restrictions and protocols to activate in response to various conditions related to severe weather. As one example, NS uses a checklist approach to prepare for severe weather, ensuring that engineering personnel coordinate with transportation regarding potential track issues. NS also utilizes AccuWeather to provide forecasting and real-time weather data in support of its protocols. And NS supplements its own engineering workforce by contracting with RailPros to respond 24 hours per day to pipe and wire emergencies that may impact NS routes in the event of severe weather. NS also has policies in place to conduct special inspections of structures in the event of severe weather, and to adjust rail

[8] NS has sought FRA approval of a waiver to substitute visual inspection with automated. The waiver has not been granted and, as of now, automated inspection supplements—not supplants—visual inspections.

traffic accordingly. For example, if an incident such as a flood occurs that might affect one or more structures, train operations are halted on the affected structure pending an emergency inspection.

C. Integration Plan

1. Bridges and Structures

Applicants anticipate that following the integration the combined UP/NS will continue operating with the UP and NS bridges and structures plans that are currently in place and that this approach will continue while the combined railroad conducts a comprehensive review of assets and programs.

Applicants anticipate that, after the review is complete, the combined railroad will integrate certain inspection and maintenance software and bridge and structure processes and will apply UP's software and processes across the combined network. Similarly, for the BMP plan, Applicants expect to use UP's BMP plan as the foundation for integrating one consistent BMP plan across the entire system. This integration will take place once related systems have been upgraded and will be executed following a careful, coordinated process.

Applicants expect that UP/NS employees will be trained on the relevant policies and procedures of the combined railroad, as well as the use of UP's risk-based protocols to increase the inspections of bridges and structures, as necessary.

2. Track Infrastructure

Applicants anticipate that following the combination, UP/NS will continue operating the legacy UP and NS track infrastructure programs while a comprehensive review is conducted. UP/NS will use this review to determine a plan

to integrate the track infrastructure programs. Applicants expect that after the combination UP/NS will adopt UP's Engineering Track Maintenance Field Handbook and engineering maintenance systems (Track Maintenance Planner, Track Inspection System) across the combined system. Until training can be completed, UP/NS will continue to follow the guidelines of 49 C.F.R. Part 213.

Utilizing as a foundation UP's CWR plan that the FRA has reviewed and approved under 49 C.F.R. § 213.118, Applicants expect to establish one consistent CWR plan across the entire system. The integrated UP/NS CWR plan will include UP's best practices and data management tools for tracking and documenting CWR events, as well as its proven CWR calculator. This integration will take place once related systems have been upgraded and through a careful, coordinated process.

Applicants will carefully review both UP's and NS's OTS programs and practices to determine what is best for the combined railroad. In accordance with FRA regulations, UP and NS each have a manual of OTS rules and instructions. Pending this review, Applicants currently plan to use UP's OTS manual, enhanced as appropriate through the identification of best practices from NS's OTS manual. Applicants are committed to executing a careful, coordinated process for integrating the OTS programs.

IX. Hazardous Materials

A. Hazardous Materials at UP

UP's hazardous materials program is built upon four pillars: prevention, preparedness, response, and recovery. Specifically, the hazardous materials program's overall mission is to prevent the release of hazardous materials through

controls and proactive measures, prepare for potential incidents by maintaining readiness and resilience, safely respond to mitigate impacts when events occur, and lead recovery efforts to restore safety, continuity, and confidence. The program aims to ensure the safe and efficient transportation of hazardous materials by reducing risk through detailed inspections and strict protocols, partnering with customers, first responders, and the regulatory communities, all while maintaining readiness to respond quickly and safely to any incident. In accordance with UP's Environmental Management System and ISO 14001 guidance, each of the program's four pillars is managed as an individual program.

UP's Hazardous Materials Management (HMM) team members are leaders in hazardous materials transportation safety, securement, response, and recovery. The team consists of 18 highly trained professional hazardous materials managers overseeing response contractors assigned to their respective territories. The managers and their teams are strategically located throughout UP's 23-state system. These managers are assigned to the Operating Department within the CSO's reporting structure.

1. Prevention

Prevention is a critical component of UP's hazardous materials program. The program reduces risk by involving key stakeholders and requiring 24/7 support, strict hazmat protocols, advanced technology, and clear employee guidance. UP values first responders as key partners and the first line of defense and collaborates with emergency personnel, sharing best practices and conducting drills and exercises.

Each year, the HMM team inspects an average of 5,500 hazardous material shipments, primarily tank cars. During these inspections, team members collectively climb more than 12 miles of ladders annually to visually inspect all sides of tank cars and the fittings located on top. These random inspections are designed to identify and prevent non-accident releases (NARs) and to ensure that shippers are securing their shipments properly. If a defect or release is discovered, the HMM team makes immediate corrections when possible and communicates with the shipper so corrective actions can be implemented at the loading or unloading rack. Inspections are documented in the HMM team report database, and failed inspections result in tariff charges.

UP has developed an embargo process for hazardous materials shippers who struggle to secure their shipments properly. The HMM team works with shippers to help identify issues and solutions. Shipments are paused until issues are resolved, at which point additional inspections are conducted to ensure compliance before resumption. This collaborative approach—working hand in hand with shippers—helps strengthen safety along the entire supply chain.

To further strengthen shipper safety practices, the HMM team offers training based on AAR Pamphlet 34: Recommended Methods for the Safe Loading and Unloading of General Service and Pressure Tank Cars. This training is provided free of charge to shippers along the UP network. In addition, shippers may request on-site plant visits, where team members provide expertise and recommendations to improve safety across the logistics chain. In the last ten years, UP has conducted

approximately 68 such visits with shippers. UP believes this approach to safety education is a key component to preventing incidents. In 2015, UP reported 188 NARs. By 2024, UP decreased that number to 123—a 35 percent reduction.

Prevention efforts also extend to UP employees. All controlled products used in the workplace must be identified and handled in accordance with UP's policies on health and safety, which align with and satisfy OSHA's Hazard Communication Standard, 29 C.F.R. § 1910.1200. For example, in addition to complying with other operating rules, UP employees must transport hazardous materials in compliance with UP's Instructions for Handling Hazardous Materials, form 8620. The document provides comprehensive rules and guidelines for the safe transportation of hazardous materials by rail, in accordance with the regulations set forth in 49 C.F.R. Part 174. The Operating Practices team, with the assistance of the HMM team, ensures this document is kept current with best practices. In addition to the inspections of shipments described above, the HMM team conducts train inspections to verify compliance with placement requirements and also engages with yard personnel through in-person interactions to reinforce the important preventative role yard personnel have when working with or around hazardous materials.

UP utilizes electronic data interchange (EDI) to electronically transmit and receive information accompanying shipments, including hazardous materials shipments. Shippers provide information about shipments, which is then stored and able to be transmitted via EDI. UP currently supports the ANSI X12 formatting standards and Rail Industry Guidelines derived from these standards. The EDI

system ensures that hazardous materials information is processed accurately and contains all required information. If there is a problem with any documentation or information submitted by the shipper, the system will automatically reject the waybill and issue a notification to the shipper, which must be resolved by the shipper before resubmitting and before UP picks up the shipment. The Customer Care and Support, Hazmat Team, assists shippers who have any questions about this process.

EDI provides this data to all downstream IT systems, including UP's overarching IT system, NetControl, ensuring that information provided by shippers is readily available in a digital format across multiple functions. The shipper-provided waybill information is used to identify train cars containing hazardous materials and to help ensure that the placement, movement, and scheduling of such cars follow federal regulations. Additionally, UP uses the Physics Train Builder (PTB) program, including for trains carrying hazardous material, to help predict the in-train forces that may occur during a trip and help determine how a train will handle, where cars should be placed, what power will be needed, and the best routes.

2. Preparedness

Preparation is critical to an effective incident response, and it begins with equipping the HMM team with the proper training and tools. UP actively tracks and manages HMM team members' required hazardous materials training to ensure they are qualified and ready to respond. In addition, the HMM team conducts thorough monthly inspections of all response tools and equipment. These activities help to ensure that UP remains prepared to respond safely and effectively to any hazardous materials incident.

a. Contingency Planning

UP maintains a comprehensive suite of contingency plans, managed by the HMM team through the contingency plan program. The plans clearly outline roles and responsibilities, establish effective communication pathways, and foster engagement with local, tribal, state, and federal response agencies.

The plans also meet all applicable state and federal requirements, including those set forth in 49 C.F.R. Part 130 for Oil Spill Prevention and Response; the Oil Pollution Act of 1990; and California's additional requirement for operators to have Certified Spill Management Teams. UP has also developed two Geographic Response Plans to assist responders with tactical-level guidance during potential incidents.

To maintain plan accuracy and readiness, UP follows the triennial cycle outlined in the National Preparedness for Response Exercise Program, as well as state-specific requirements.

At the core of the contingency planning framework for hazardous materials is the Hazardous Materials Emergency Response Plan (HMERP), which details UP's emergency response procedures for managing accidents and incidents involving hazardous materials, as well as commodities the EPA considers "hazardous substances and hazardous wastes." This performance-based plan provides guidance on communications from the initial report of a release, to reaching stakeholders and informing high-level company leadership. The plan also outlines training requirements for all personnel involved in incident response, ensuring that each team member is fully prepared to perform their role effectively.

The HMERP is made available to all applicable employees via UP's intranet and via posting of printed copies at major facilities. It is also available to union representatives, OSHA representatives, and legally constituted state and municipal emergency response agencies, commissions, and planning agencies. The HMERP is supplemented with site-specific emergency response information unique to each applicable facility, such as the emergency contact telephone numbers for local police, fire, and medical services.

All UP employees are required to review the HMERP Guide, which provides a high-level summary of hazardous materials regulations, recognizing hazardous materials, required documentation, and what to do if the employee observes or discovers a release of hazardous materials. UP employees are expected to act in accordance with the Guide when circumstances require, including obligations to protect themselves, alert others in the area, promptly report all releases, and respond to incidental releases if properly trained and equipped.

b. Response Equipment

The HMM team maintains a wide range of specialized response equipment, strategically staged and ready for immediate deployment. This equipment plays a vital role in supporting safe, effective, and timely responses to hazardous materials incidents across UP's system. The fleet includes: response trucks outfitted with PPE, specialized tools, and response gear; fire trailers specifically designed to combat flammable liquid fires; firefighting foam support trailers; strategically located oil spill response trailers stocked with containment technology, PPE, tools, and response materials; and chemical transfer trucks and trailers. UP is the only Class I railroad

in North America that owns and operates its own chemical transfer equipment, rather than relying on third-party contractors. This capability enables a faster, safer, and more controlled response, while ensuring full compliance with chemical compatibility and procedural requirements.

Each HMM team member has the responsibility and authority to ensure that their assigned equipment meets UP's readiness standards at all times.

c. Training: Mobile Equipment & Programs

UP's HMM team is committed to providing realistic, hands-on training to both UP team members and external emergency responders. To achieve this, UP maintains a fleet of specialized training railcars and trailers designed to simulate real-world conditions and scenarios. These include mobile training railcars that simulate hazardous materials releases and provide classroom instruction in the field, as well as regionally located training trailers.

On average, UP's HMM team trains more than 5,700 emergency responders each year. To prepare first responders, UP offers several training classes to ensure responders are ready for any rail-related incident. These courses are offered at no cost and provide both specialized railroad training and the opportunity for emergency responders to build strong relationships with the HMM team. Participants learn how to contact the railroad during an emergency, interpret shipping documentation, understand derailment safety considerations, and identify the resources UP can provide during a response. The HMM team also partners with Transportation Community Awareness and Emergency Response to support large-scale training events.

d. Coordination with Government Agencies and First Responders

UP complies with federal requirements under Pipeline and Hazardous Materials Safety Administration regulation HM251-B (49 C.F.R. Part 130), which mandates that railroads provide State Emergency Response Commissions and Tribal Emergency Response Commissions with information regarding High Hazard Flammable Trains (HHFTs). The regulation also requires the railroads to identify a point of contact for questions regarding HHFTs. UP has designated two senior HMM team members to serve in this role.

Additionally, UP provides commodity flow reports to official governmental agencies upon request. These confidential reports help local agencies plan for potential incidents. They contain data on the type, quantity, volume, and distribution of hazardous materials being transported through a specific community. On average, UP fulfills more than 125 commodity flow report requests each year.

As a member of the AAR, UP also provides information via Ask Rail, a free mobile phone application for first responders. Ask Rail provides hazardous material shipment information along with emergency isolation distances and railroad emergency contact phone numbers.

3. Response

The RMCC located in Omaha is UP's 24/7 incident response communications hub. RMCC serves as UP's primary emergency response call center and supports UP operations by managing communications, coordinating responses, and facilitating efficient information flow during emergencies and day-to-day incidents across UP's

network. UP's policy requires that UP employees contact the RMCC as soon as possible if they observe the release of environmentally sensitive or hazardous materials. Once alerted, RMCC coordinates with UP's emergency response personnel (including the HMM team), and local, state, tribal, and federal authorities as appropriate.

As described above, the HMERP is a company-level plan that outlines the response to a hazardous material incident. In the event of a hazardous material release or spill, UP's response process is designed to integrate seamlessly with public incident command structures. At the scene of a release or spill, the team's primary objectives are to protect life and health; protect public infrastructure and the environment; cooperate with and assist government emergency response agencies; and comply with local, state, and federal regulations. Whenever possible, HMM team members establish unified command with other responding agencies, emphasizing open and transparent communication with all stakeholders.

To ensure consistency and effectiveness, UP has also developed internal guidance documents, including the Incident Response Process document, which outlines resources and activities, designates responsible parties for incident response activities, and categorizes incidents according to a three-tiered system.

4. Recovery

Once an incident has stabilized, the recovery process begins. If a tank car is damaged and cannot travel safely by rail, its contents must be transferred to an undamaged tank car or highway truck. UP is the only railroad that owns and operates all the specialized equipment necessary to transfer liquids and compressed gases.

This process is complex and requires constant communication with the shipper or product owner to secure an undamaged replacement tank car; obtain product-specific handling guidance; coordinate with UP's transportation team to schedule and position the replacement car; and organize and deploy the chemical transfer team with specialized equipment to complete the transfer safely and efficiently. After the damaged tank car has been fully emptied, it is cleaned and purged to remove all chemical residues. It is then either safely repaired or dismantled.

Once all hazardous materials have been safely removed from the incident site and returned to the shipper or sent for proper disposal, the project is transitioned to UP's Site Remediation Department. This team manages environmental remediation activities and ensures full closure in coordination with regulatory agencies.

Once the emergency phase of an incident is complete, UP conducts a post-incident critique with all available parties to help identify lessons learned, improve coordination, and to improve the safety and efficacy of future responses.

B. Hazardous Materials at NS

Safety is paramount to all rail operations, but NS recognizes the extra care that must be taken to ensure safe and reliable transportation of hazardous materials. In the treatment of hazardous materials, NS has both preventative and responsive policies and programs. NS has further developed and improved those programs in the wake of the East Palestine incident.

1. Preventative Policies and Programs

As noted in the section on signal and train control above, NS has expanded its network of wayside detectors to monitor for and anticipate potential infrastructure

issues. Consistent with federal requirements, NS also performs route risk analysis for trains carrying certain types of material, reduces the maximum train speed of certain trains in High Threat Urban Areas (there are 20 such areas on the NS system), and uses a Rail Corridor Risk Management System (RCRMS). RCRMS is a software program used to analyze and identify the safest routes for transporting hazardous materials by considering various risk factors like population density, infrastructure, and environmental conditions along the rail corridor. NS implements the recommendations and outputs of the Risk Management system such that shipments of hazardous materials are transported on the safest routes, reducing the risk of any issue.

NS's Hazmat team—made up of nine territory-based employees—conducts Hazmat Checkups randomly at yards. At these inspections, the hazmat managers review the yard's handling of hazardous materials by reviewing and checking paperwork (train consists, waybills, and other shipper-provided paperwork), inspecting rail cars, reviewing yard evacuation plans, and conducting further checks to ensure appropriate safety management such as ensuring that hazmat placards match the waybills and consists and reviewing yard spill response equipment and supplies. They also review training records at intermodal facilities and Thoroughbred Bulk Transfer terminals where the operators (rather than NS) are responsible for training. Tank cars discovered to be defective through these Hazmat Checkups or through the typical car inspection process are subject to FRA holds—and are held from service until adequate repair—to avoid the cars being released and added to

trains. Deficiencies noted during the Hazmat Checkups may also result in tariff charges to the shipper, if appropriate. Each hazmat manager is required to do three Hazmat Checkups per quarter. Hazmat managers will prioritize areas with higher frequencies of incidents. And once the Checkups are complete, the results are immediately shared with yard supervisors and stored in NS's emergency response portal.

NS also works closely with local jurisdictions. It has developed a comprehensive guidance document for first responders, the "Norfolk Southern Emergency Response Planning Guide," to assist local emergency response organizations in their efforts to plan for and respond to railway related incidents or emergencies, including emergencies involving hazardous materials. It also supplements the robust training programs NS presents to the emergency response community. NS also actively engages with first responders through its Operation Awareness & Response (OAR) Program. A key function of OAR is NS's "Safety Train." The Safety Train is equipped with a dedicated locomotive, specially designed classroom box cars, and several tank cars that provide essential hands-on training to first responders across the NS network. Over 5,000 first responders per year receive training from NS. NS also has two training trailers with tank car housing dedicated to safety training efforts for first responders. In addition to the hands-on training the Safety Train provides, NS also trains first responders on the AskRail app, which enables first responders to obtain critical real-time consist information and response information for the commodities on the train.

In 2023, based on lessons learned from the East Palestine incident, NS began a partnership with RapidSOS. Through the RapidSOS platform, over 15,000 9-1-1 and field responder agencies across the NS network can receive immediate notification of safety incidents. The RapidSOS platform allows NS to quickly provide critical information, including train cargo and hazmat information and emergency response standards, to responding agencies, and to digitally escalate issues to surrounding agencies for mutual aid and support. This platform is provided for free to public safety agencies across NS's network.

2. Responsive Policies and Programs

NS currently has nine hazardous materials managers, a subset of their environmental protection teams, spread across its network that are on call 24 hours a day, seven days a week, 365 days a year to respond to any emergency across the rail network. In addition to NS's in-house experts, NS has an extensive network of hazmat response contractors and environmental consultants. NS also utilizes Incident Action Plan software, an incident and crisis management tool, to implement the National Incident Management System (NIMS) Incident Command System (ICS) that provides for an organized and integrated structure to coordinate an incident through all stages of the event. Although NS strives to avoid such situations, it has the ability to surge resources into an area when necessary to coordinate with local officials in response to hazmat situations. This includes its equipment trailers for foam supply and firefighting, which are staged at various locations around the NS territory. NS also maintains spill supplies at most rail yards. Additionally, NS

maintains relationships with environmental contractors to provide additional support when necessary.

A robust Emergency Response Plan (ERP)—digitally available to all NS employees through several platforms—is also maintained and is a topic during Sentinel training. The ERP is NS's comprehensive internal response plan that provides guidance and standard operating procedures to employees responding to hazmat incidents and emergency situations. The comprehensive guide covers everything from spill reporting, the ICS and NIMS response protocols, to preparing for natural disasters. It is reviewed and updated by the hazmat team annually with best practices.

C. Integration Plan

UP and NS both maintain robust and highly capable hazardous material programs and policies. Applicants expect that following the combination UP/NS will continue operating with UP's and NS's hazardous materials programs currently in place and that this approach will continue until UP/NS completes a comprehensive review of assets and programs. Subject to completion of that review and any resulting adjustments, Applicants anticipate that, following an initial transition period, the NS portion of the combined system will adopt many of UP's programs, procedures, and systems, as described below:

Organizational Structure. Applicants anticipate that following the combination, current NS staff responsible for the NS hazardous materials program and emergency response will be incorporated into the legacy UP hazardous materials organizational structure. As part of the integration, UP/NS would review staffing

levels and capabilities to confirm whether there are sufficient resources to effectively manage the combined UP/NS's hazardous materials mission.

Prevention Program. Applicants anticipate that following the combination NS's hazardous materials inspection program will be incorporated into the robust UP prevention program.

Training Programs and Equipment. Applicants anticipate that during the initial integration phase, legacy NS and UP employees will work together to identify a comprehensive list of differences between the hazardous communications procedures, "hazmat employee" training, and specialized emergency response training at NS and UP. The combined team would then assess what aspects of NS's training programs will be incorporated into the anticipated UP-originated training program. Applicants anticipate that ultimately the combined UP/NS will develop and implement a uniform training program that is identical across the entire network. Additionally, Applicants anticipate that following the combination the legacy NS training equipment will be incorporated into the legacy UP training equipment fleet, resulting in an even more robust response and prevention program for communities across the system.

Hazardous Materials Emergency Response Plan (HMERP) and Contingency Plans. Applicants expect to maintain the independent legacy UP and NS ERPs for a period following the combination, as legacy UP and NS employees work together to identify the best way to integrate the response plans. As part of this process, UP/NS will thoroughly evaluate emergency response communication

protocols and platforms, including NS's RapidSOS platform, to identify the most effective solution for the combined railroad. At this time, however, Applicants anticipate that the combined company generally will adopt UP's ERP and processes. Specifically, to ensure that uniform emergency response planning exists across the United States and that the hazardous materials team is in charge and responsible for all incidents involving hazardous materials or incidents within areas of sensitive receptors, Applicants anticipate that applicable NS ERPs will be incorporated into UP's HMERP and contingency plans.

Emergency Response Contractor Network. Following the combination, Applicants anticipate that UP will review and incorporate NS's emergency response third-party contract resources into UP's emergency response contractor network.

Emergency Response and Recovery Assets. Applicants anticipate that UP/NS will incorporate all NS-owned emergency response assets into the legacy UP response network and the legacy UP maintenance and inspection program. UP/NS will also review the amount and location of NS-owned emergency response and recovery assets for appropriate coverage and determine whether additional assets and additional training are needed. UP/NS will review the capabilities of the NS third-party emergency response contractors and determine whether additional resources are required.

U.S. Hazardous Materials Instructions for Rail (USHMI). Both NS and UP have USHMI based on federal requirements (*i.e.*, Instructions for Handling Hazardous Materials, Form 8620 for UP, and HM-1 for NS) that cover all aspects of

rail transportation, including documentation, car inspection, placards and markings, switching, train placement, key trains, and emergency response. Furthermore, train crews for both NS and UP are trained in these instructions and are required to carry a copy while on duty. For a period following the combination, legacy UP and NS employees will maintain independent sets of USHMIs. During this time, the legacy UP and NS staff will work together to identify differences between the USHMI for the two systems. Once the differences are identified, the combined staff will work together to develop a revised USHMI for the combined network.

Hazardous Materials Documentation. Applicants expect that, following the combination, legacy UP employees will review the legacy systems and processes for hazardous materials documentation. For a period following the combination, the legacy UP and NS portions of the combined railroad will maintain separate hazardous materials documentation systems. Applicants expect the combined system will ultimately utilize the legacy UP's hazardous material documentation systems and processes.

Data Reporting Systems. Following the combination, legacy UP and NS employees will review the legacy NS data reporting systems and processes for hazardous materials regulatory reporting. For a period following the combination, until all waybill and train data are integrated into a single system, the combined railroad will maintain two separate reporting systems for hazardous materials until all waybill and train data are integrated into a single system.

AskRail. Applicants anticipate that, following the combination, NS's emergency contact information in the AskRail application will be removed, and all queries entered into the app on the legacy NS's property will be directed to UP's emergency response contact information. Once two railroads' data systems are integrated, UP/NS will conduct additional testing of the AskRail application to ensure that it is reporting the correct information for hazardous materials car queries and train consist queries on the combined network.

Testing Programs. For a period following the combination, the legacy systems will maintain separate processes for evaluating compliance with operating requirements including the requirements of USHMI. Thereafter, Applicants expect to adopt an integrated testing program as outlined in the Operating Rules section above.

X. Dispatching Operations

A. Dispatching Operations at UP

UP manages its train dispatch operations from its dispatch center in Omaha, Nebraska, which covers the majority of territories in which UP operates, and its dispatch center in Spring, Texas, which covers Louisiana and the South Texas region. To ensure continuity and support for its dispatching functions, UP maintains a Disaster Recovery Facility (DRF) in Omaha, which allows uninterrupted continuity in dispatching operations in the event of severe weather or other significant disruptions impacting either of the dispatching centers. The DRF is regularly tested to guarantee its operational readiness.

UP coordinates all main track authorities utilizing the following systems and processes:

Track Bulletins. Track bulletins are communicated to train crews both electronically and verbally through a combination of automated and manual processes. Train dispatchers issue track bulletins to train crews electronically using the Bulletin Line Item (BLI) system within UP's CADX platform. Upon the creation of a new track bulletin, the BLI system automatically generates a protection list, alerting the train dispatcher of any active trains that have not yet received the updated track bulletin. If a train has not been issued an applicable track bulletin, the CADX system restricts the issuance of authority for entry into the affected area until the train receives the necessary track bulletin.

CTC. Train dispatchers use the CTC signal control system, which provides control of signals, switches, bridges, and certain track side devices such as switch heaters and electric lock switches. Train dispatchers monitor and control the CTC system through a graphic display of the territory on the CADX platform. Train and track worker authorities are issued through a text interface that is represented on a graphic screen. Specifically, dispatchers issue authorities directly to the train crew's PTC screen; the authorities are then verified back verbally by the train crew. If PTC is inoperable, written authorities are issued by voice and are relayed back word-by-word and digit-by-digit by the train crew to ensure accuracy. Authorities remain in effect until voided or otherwise fulfilled by the train and track worker. The CADX

system performs rule checks to ensure that authorities comply with the applicable rules for a given territory.

Track Warrant Control. Train dispatchers utilize the CADX platform to create, change, and void track warrants. Train dispatchers oversee and operate the system via a graphical display that represents the territory in question. In the CADX system, train dispatchers issue authorities directly to the train crew's PTC screen; these authorities are then verified back verbally by the train crew. If PTC is inoperable, written authorities are communicated verbally and relayed back by the train crew to guarantee precision. These authorities remain effective until they are either voided or otherwise fulfilled by the field employee. The CADX system performs rule checks to ensure that authorities comply with the applicable rules for a given territory.

Train Dispatcher Workload. UP employs a proprietary method to evaluate the workload of train dispatchers by analyzing 105 types of transactions within the CADX system. This transactional data encompasses all items created, issued, and voided. Each transaction type is classified as automated, semi-automated, or manual. The average completion time for each transaction type is determined through a comprehensive time study of train dispatchers. Utilizing this time study, UP calculates the workload for each dispatch desk and shift. UP conducts regular reviews of dispatcher workloads to ensure optimal distribution and alignment across positions and shifts, and to identify opportunities for improvement. When it identifies

a workload imbalance, UP typically implements necessary updates to the territory, including through territory training and radio work, within six to eight weeks.

B. Dispatching Operations at NS

NS dispatches from the NOC in Atlanta, Georgia. The NOC is in charge of every aspect of train operations from origin to destination. Co-located with the network-wide dispatching functions in the NOC are other safety-critical support functions facilitating seamless cross-functional communication. These functions include locomotive control and distribution, the Crew Management Center, the PTC Help Desk, the Wayside Help Desk, the Mechanical Operations Control Desk, general superintendents of transportation managing service disruptions and unforeseen events, and NOC coordinators responsible for communicating with the National Response Center and other public agencies. The NOC team plans, organizes, executes, and troubleshoots operations to safely deliver reliable and resilient service to NS's customers. NOC employees are empowered to continually identify and address hazards and have stop work authority to address unsafe conditions—just as all other NS employees do.

NS has a back-up dispatching facility in Tucker, Georgia. This is the same location where new hire train dispatcher training occurs. It can be used for disaster recovery and/or other system outages that impact the NOC. A cutover from the NOC to Tucker is drilled annually to ensure smooth functionality.

NS utilizes the UTCS computer-aided dispatch system. Wabtec's Movement Planner is a UTCS overlay that provides support for network optimization and auto-routing of train movements. Movement Planner can also operate switches on pre-

programmed routes and monitor other infrastructure to ensure network fluidity. The UTCS system and Movement Planner overlay manage the transmission of bulletins and other mandatory directives to train crews, roadway workers, and others with a need for these transmissions. UTCS is used for track-authority-controlled segments of the network, as well as signalized track.

C. Integration Plan

In the initial phases of integration, Applicants expect that the legacy UP and NS dispatching centers will maintain independent operations. During this period, legacy NS dispatchers will maintain their operations in Atlanta, Georgia, while legacy UP dispatchers will maintain their operations in Omaha, Nebraska. This geographic continuity will allow each team to focus on their responsibilities without disruption, thus preserving operational continuity and stability, reducing the risk of an adverse impact on overall operations due to the integration process, and facilitating a measured approach to integration as UP/NS harmonize their operations.

During the initial phases of integration, the legacy UP and NS dispatching centers will utilize their respective train control systems, namely, CADX for UP and UTCS for NS. During this time when integration is pending, the PTC back offices will also maintain separate operations and systems.

Applicants anticipate UP/NS will complete a detailed evaluation of both train dispatcher operating systems, CADX and UTCS, and likely will select one system to serve as the primary application for all train dispatchers. Applicants expect that prior to any transition of train dispatcher operating systems, the combined railroad will

conduct a thorough review of rules specific to each legacy system to ensure differences in dispatching rules and procedures are addressed. The PTC back offices will integrate concurrent with integration of the train dispatcher operating systems.

As described further below in the Information Systems section of this Plan, Applicants are committed to a careful, coordinated process to ensure a safe and non-disruptive integration of systems. Applicants intend that throughout the integration process the combined railroad will comply with all federal requirements and that the UP/NS Training Department will provide training or certification when changes are required. Train dispatcher operating system changes will be properly vetted and tested prior to implementation, and that changes will be made incrementally where possible to minimize risk, with appropriate training for stakeholders, and only when safe and effective operations can be maintained.

XI. Highway-Rail Grade Crossing Systems

A. Highway-Rail Grade Crossing Systems at UP

UP has a total of approximately 36,355 grade crossings, about 69 percent of which are public crossings protected by one or more of the following features: lights, gates, warning devices, crossbucks, or stop signs. Remaining crossings are located along private property, such as farmland. UP is dedicated to promoting highway-rail grade crossing safety and reducing blocked crossings. UP promotes safety at crossings by placing warning signs and other infrastructure at crossings, providing safety education to the public, and using advanced technology that helps to reduce blocked crossings. Additionally, UP conducts maintenance, inspection, and testing, and reports incidents in compliance with 49 C.F.R. Part 234.

1. Promoting Crossing Safety

Consistent with FRA requirements, UP places at each grade crossing Emergency Notification System (ENS) signs that are compliant with the Manual on Uniform Traffic Control Devices (MUTCD) standards. UP collaborates with the responsible road authority to design and place warning devices such as lights, gates, bells, flashers, and signs. When designing and installing these warning devices, UP follows specific design and engineering standards including the MUTCD. In addition, UP has installed fencing at locations on the railroad right of way where trespassing is a known problem. Fencing locations are identified and prioritized based on a review of trespasser reports, trespasser contacts by UPPD, train traffic volume, previous public safety incidents, and civic factors. Based on internal UP data, since 2017 UP has installed more than 121,125 linear feet of fencing across its railroad system. In addition, UP stencils "No Trespassing" on the rails in high trespass areas and posts "No Trespassing" signs at various locations throughout the UP network.

UP fully supports the Federal Highway Administration's Section 130 Program, which provides funds to state agencies for safety improvements at public highway-rail grade crossings. UP collaborates closely with each State Department of Transportation (DOT) to implement those improvements. From about February 1, 2019, through May 30, 2025, UP collaborated with public agencies in 17 states on over 755 grade separation projects, including new greenfield grade separations, reconstruction of existing grade separations, and grade separation maintenance projects. Additionally, UP contributed over $9 million towards the cost of those projects.

UP also engages with government agencies to develop crossing consolidation or closure solutions consistent with DOT's stated goal of consolidating and reducing highway-rail grade crossings. In the past 10 years, UP has actively worked to permanently close over 6,000 road crossings. UP also actively updates the U.S. DOT National Highway-Rail Crossing Inventory database, which is a database of all crossings in the nation. When determining whether to install new crossings, UP and the road authority consider the safety of the proposed new crossing, as well as whether the new crossing is necessary or if existing crossings could be used instead.

UP's RMCC manages UP's incident response to emergency situations and non-emergency reports. Members of the public may report emergencies, issues, or concerns to the RMCC by calling the phone number on the ENS sign posted at each crossing or by using the NotifyUP app. The caller can also identify the FRA/DOT number located on the ENS sign; this information helps RMCC identify the location of the caller. Upon receiving notification of an emergency situation, including at a crossing, RMCC immediately notifies train management to slow or stop nearby trains to prevent collisions with persons or objects on the track and for the protection of responders. RMCC contacts federal, state, tribal, and/or local emergency response authorities, as well as UP responders (*e.g.*, members of the UPPD), as applicable. In situations where it is appropriate to provide a train consist to first responders, RMCC sends and verifies receipt of the consist with the responding agency during the initial phone call.

UP partners with various government agencies and private organizations to promote rail safety. UP employees conduct free rail safety presentations through the UP Crossing Accident Reduction Education and Safety (UP CARES) program. Anyone can request a presentation, including schools, community groups, public agencies, and private businesses. UP also shares rail safety resources on the company website at UnionPacificCares.com. During 2024, 126 UP volunteers participated in UP CARES events. This team of volunteers provided 121 rail safety education sessions to a combined 41,038 attendees.

UP actively participates with Operation Lifesaver, a non-profit organization nationally recognized as a leader in rail safety education. Since 1972, Operation Lifesaver has been committed to preventing collisions, injuries, and fatalities on and around railroad tracks and highway rail grade crossings, with the support of public education programs in 47 states and the District of Columbia. There are currently 185 Operation Lifesaver Authorized Volunteers (OLAV) who are affiliated with UP and are active in Operation Lifesaver programs, and 17 active UP Railroad Investigation Safety Course (RISC) instructors. In 2024, UP's OLAV staff reached 24,806 people through Operation Lifesaver presentations, and an additional 89,873 people through special events (fairs, safety booths, train days, etc.) across UP's network of states. UP remains dedicated to supporting Operation Lifesaver, Inc., with its CSO serving as a member of the Operation Lifesaver Board of Directors.

Table 7
UP Operation Lifesaver Presentations Completed in 2024

State	Presentations	State	Presentations
WY	178	KS	6
AR	59	CA	5
NE	52	MO	5
LA	34	IL	3
IA	21	WI	3
TX	13	WA	2
CO	10		

The UPPD also has Operation Lifesaver certified instructors for its RISC. This course is designed for state and local law enforcement officers with the purpose of teaching safe behavior and investigative techniques when responding to a railroad related incident. In 2024, UPPD conducted 33 RISC classes for state and local law enforcement.

Additionally, UPPD special agents work with state and local police to help ensure drivers and pedestrians safely cross railroad tracks at designated crossings. UPPD special agents work with officers to observe motorist and pedestrian behavior in and around railroad tracks. If drivers or pedestrians ignore signals and warnings, they are stopped and reminded to follow all railroad-related laws. Depending on the severity of the violation a citation may be issued. Additionally, the UPPD has dedicated significant resources to combat trespassing and UPPD special agents employ specific investigative procedures when handling potential felony charges stemming from grade crossing traffic violations.

2. Reducing Blocked Crossings

UP works to mitigate the frequency and duration of blocked crossings through its blocked grade crossing reduction program. The program is supported by a dedicated team of operating professionals, including specialists from the Safety Department (Operating Practices team), Public Affairs, the Harriman Dispatching Center, and local operating field management teams.

UP takes a dynamic, data-driven approach to identifying blocked crossings, reducing their impacts and frequency, and tracking progress in blocked grade crossing mitigation. UP's approach for mitigating blocked grade crossings begins by targeting the top-impacted crossings. UP highlights these grade crossings in bulletins issued to affected service units and on dispatchers' CADX displays. Additionally, using PTC-GPS data, UP provides dispatchers with real-time alerts and notifications when a targeted crossing is blocked longer than ten minutes. These alerts are provided via email and pop-up notifications called Train Management Alerts (TMA). These notifications are supplemented by visual aids displayed on the dispatcher's CADX display. The alerts provide the dispatching team awareness of blocked crossings so they can help to expedite the clearing of these crossings. Where feasible, operating changes are made to reduce congestion at top-impacted crossings.

Members of the public can report blocked crossings to the RMCC, which forwards these reports to the Operating Practices Blocked Crossing team in the Safety Department. This team reviews complaints, works with local operations, and coordinates with the dispatch center to address recurring issues.

Additionally, UP tracks its progress on blocked crossing mitigation through its Interactive Blocked Crossing Tableau Site. UP's Tableau Site aggregates and reviews daily reports to identify trends using heat maps and adjustable parameters, which helps UP direct response efforts and measure improvement over time. Since 2023, UP has reduced average blocked crossing response times by 30 percent in key regions where blocked crossings are historically high. This improvement demonstrates a tangible benefit for the communities served, enhancing both public safety and mobility for communities.

UP has also partnered with the communities in which it operates to reduce the frequency of blocked crossings and enhance safety. For example, in Houston, Texas, UP has worked closely with public stakeholders to identify critical roadway crossings that are close to schools, serve as emergency response corridors, or see high volumes of public traffic. To enhance situational awareness, these critical crossings are visibly marked on dispatchers' CADX screens. Additionally, dispatchers receive TMA alerts on their screens whenever a designated critical crossing is occupied for 20 minutes. If a crossing remains occupied for more than 30 minutes, UP notifies Houston emergency responders so emergency responders can use alternate emergency response corridors.

B. Highway-Rail Grade Crossing Systems at NS

NS has 23,173 total crossings, 13,525 of which are public (managed by a public authority and broadly accessible) and 9,648 private (on private property, such as a farm or industrial site).

1. Promoting Crossing Safety

The FRA has an established goal of consolidating 25 percent of the nation's public at-grade crossings and a recommendation of no more than one grade crossing per quarter mile reduced to per half mile in rural areas. NS's main focus in finding opportunities to close crossings is in communities where detours are readily available. Incident history, existing warning devices, and train traffic count are three of the factors used in considering closures. When NS considers installation of additional crossings in response to local requests or identified public needs, safety is always the controlling factor in the approval and design of any new at-grade road crossings. Factors considered include sight distance of train and vehicle operators, types of vehicles utilizing a proposed crossing, grade of the proposed highway crossing, vehicle braking distances approaching a proposed crossing, and accessibility of the location to be served by alternate crossings if the proposed crossing is blocked by a stopped train.

NS also focuses—with local partners—significant effort on identifying and addressing safety issues at existing crossings. NS is a strong supporter of the Section 130 program and has collaborated with state DOTs to identify grade crossings that are worthy of investment. NS's work with local partners to improve grade crossings is described further below in the Capital Investment section.

NS uses both active and passive grade crossing train approach warnings. Active crossing train approach warnings use lights, audible sounds, and/or physical gates. Passive warnings utilize signs and other designs to identify an at-grade

crossing. NS has specified design standards it follows for each application, which may also include fencing at certain grade crossings.

Per federal regulations, all NS crossings have an ENS sign posted with a phone number to call, which, among other things, allows the public to report a blocked crossing. NS also participates in the industry's Operation Lifesaver program, aimed at education of the general public on dangers associated with trains moving or stopped at crossings. During the past three years, over two dozen NS employees were trained for Operation Lifesaver. NS employees have facilitated more than 30 presentations systemwide since 2024.

When NS's Police Communications Center receives an emergency call for any event at a crossing, the appropriate dispatcher is notified at the NOC so that appropriate action can be taken. When necessary, an NS Police Department agent can assist with a physical response at the scene. Local law enforcement is also communicated with to assist as needed.

NS Police also conduct targeted enforcement at crossings, including writing warnings and citations for traffic violations or even arrests if the situation warrants it, such as dangerous trespassing. Local law enforcement also conducts its own enforcement activities.

2. Reducing Blocked Crossings

NS takes blocked crossings seriously and is committed to the safety of citizens of the local communities in which it operates. NS has a team, led by the Director of Public Engagement, tasked to identify and mitigate blocked crossings across the network. Other team members come from Safety, the NOC, Transportation, Strategic

Planning, and Government Relations. To address blocked crossings, NS evaluates chronic issues to identify those locations that can be mitigated through operational changes. When operational changes are not effective, or even feasible, NS collaborates with the local, public entities to identify and secure funding for public infrastructure projects to mitigate blocked crossings. Again, this is discussed further in the capital investment section.

C. Integration Plan

Following consummation of the transaction, the combined railroad will continue to operate with separate crossing programs for the legacy systems in the near term. Applicants will perform a comprehensive review of programs and practices to determine the best practices for the combined railroad. Applicants anticipate that the combined railroad will adopt the legacy UP program to promote and maintain crossing safety and reduce blocked crossings supplementing it with some of the unique features of the legacy NS program. The combined railroad will continue to engage in public safety measures to make crossings safer and spread awareness of the importance of crossing safety.

Following the initial period of review before integration, the 24-hour emergency phone number on NS's ENS signs will be forwarded and responded to by UP's RMCC, which will coordinate an appropriate response using current UP protocols. Over time, the Primary Operating Railroad and the 24-hour emergency number will be changed on all legacy NS ENS signs to reflect the UP RMCC number.

Where changes to the rail infrastructure are proposed, such as adding a track through a crossing, Applicants anticipate that the combined UP/NS will continue the

two companies' current practices of considering safety factors when designing or approving new grade crossings. Applicants expect that the combined railroad will continue the legacy railroads' long-standing approach of collaborating with local road authorities on grade crossing configurations and traffic control devices. Applicants expect that the combined railroad will continue with robust public safety and incident response efforts that improve public safety at grade crossings, reduce the frequency of blocked crossings, and quickly address blocked crossings when they do happen.

Finally, based on an analysis by Oliver Wyman, working with Applicants' employees, Applicants have identified specific corridors across the future UP/NS network where rail traffic is expected to increase. Appendix 2 includes a list of crossings where an increase in rail traffic is anticipated through existing quiet zones. For these corridors, Applicants expect that the combined railroad will continue with programs promoting crossing safety and reducing blocked crossings.

XII. Personnel Staffing

Bringing together UP and NS will combine not only two rail networks, but also two highly skilled workforces. To ensure a stronger, more robust company, Applicants have developed a plan to capture synergies and shared expertise from each railroad's employee base, allowing UP/NS to maintain operational continuity while improving safety and customer service.

Because the proposed transaction is an end-to-end combination of railroads with no abandonments, discontinuances, or line divestitures contemplated, the combination is expected to protect and enhance employment opportunities for railroad craft employees. In particular, service improvement and traffic growth

should improve job security for these employees. Accordingly, and as formalized in agreements with some labor organizations, Applicants have made an unprecedented commitment to provide job opportunities for current craft employees who wish to continue and finish their careers as employees of the combined railroad system. To the extent there are reductions, they will be realized through attrition or relocation.

To inform their personnel staffing plan, Applicants analyzed the projected impacts of the proposed transaction at specific geographic points for three years after the consolidation. Applicants have not derived the employment projections from financial targets. Rather, the staffing analysis summarized below was developed from historically rooted projections of traffic growth, the consolidation process, and optimization opportunities, as well as location-specific considerations. Specifically, the comparatively small number of projected workforce reductions follows from extending documented efficiencies to the combined UP/NS system and the consolidation and idling of certain terminals and facilities, while the much greater number of projected new jobs follows from documented relationships between activity levels and employee levels. Therefore, in addition to having a solid, objective foundation, Applicants' plans inherently provide for sufficient employees to handle projected activity on the combined railroad.

Applicants have also factored employee attrition into the analysis. Applicants currently have a combined attrition rate of approximately eight percent per year. Because the proposed transaction will not involve large-scale employee transfers or dislocations, especially within Applicants' operating, engineering, mechanical,

maintenance, and communications and signals crafts, and because Applicants have made a commitment to provide employment in some capacity for all current craft employees, Applicants anticipate that their craft-employee attrition rate will remain about the same. This stability in the craft workforce will contribute to Applicants' maintenance and improvement of safety and service quality during the post-merger transition.

Table 8, below, summarizes the expected changes to the workforce for employee categories listed in 49 C.F.R. § 244.13(j). Applicants have mapped the craft employee classifications used in their businesses to the regulatory categories in subsection 244.13(j)(1)-(7), and identified managers responsible for oversight of safety programs to report in accordance with subsection 244.13(j)(8). Additional information about the number of current and projected employees in these categories can be found in the Labor Impact Exhibit submitted with Applicants' Amended Application.

Table 8
Projected Staffing Changes Under 49 C.F.R. § 244.13(j)

UP/NS Assignment Projections		Current Workforce	Jobs Created			Jobs Transferred			Jobs Abolished		
		Present	Year			Year			Year		
Role Description	**Role Mapped to 49 C.F.R. § 244.13(j)**	**N/A**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
Train Crew	(1) Train and engine service	21,916	632	562	504	-	-	-	307	352	269
Yard Controllers	(2) Yard and terminal service	445	-	-	-	-	-	-	-	-	27
Train Dispatchers	(3) Dispatching operations	630	-	-	-	-	-	-	8	17	8
Track Maintainers	(4) Roadway maintenance	8,854	5	31	-	-	-	-	7	2	-
Car Mechanical	(5) Freight car and locomotive maintenance	2,125	87	91	73	8	8	-	35	32	-
Locomotive Mechanical	(5) Freight car and locomotive maintenance	3,594	160	120	120	60	57	-	41	40	-
Communication and Signal Maintainers	(6) Maintenance of signal and train control systems, devices, and appliances	2,786	-	-	-	-	-	-	-	-	-
Field Hazmat Managers	(7) Hazardous materials operations	17	-	-	-	-	-	-	-	-	-
Safety Managers	(8) Managers responsible for oversight of safety programs	40	-	-	-	-	-	-	-	-	-
Total			**884**	**804**	**697**	**68**	**65**	**-**	**398**	**443**	**304**

Table 8 shows that over the first three years after the transaction, while some positions in the covered categories will be transferred or abolished, more than twice as many positions will be created, particularly in the areas of train and engine service and car and locomotive maintenance. There will be limited impacts in the areas of dispatching operations (as productivity levels of legacy NS dispatchers align with

productivity levels of legacy UP dispatchers, in accordance with the applicable CBA) and yard and terminal service (due to efficiencies from implementing UP's Terminal Command Center technology in legacy NS yards). There will be no impacts in the areas of maintenance of signal and train control systems, devices, and appliances; hazardous materials operations; and managers responsible for oversight of safety programs.

To ensure stability and continuity, as with all other aspects of the integration, workforce adjustments will be implemented gradually and in phases, with affected roles preserved until the associated operational integration is complete. This approach will help safeguard essential functions, capture operational efficiencies, and create opportunities for professional growth, ensuring that the combined company will be well-positioned to deliver reliable service, support employees, and grow. In addition, as extra assurance of strong service and operational reliability throughout the transition, positions critical for the successful integration of new technology or responsible for maintaining current systems support and connectivity will not be significantly impacted at all.

The operational consolidations arising from the combination will also entail some regional adjustments, including those associated with the headquarters relocation. Omaha will serve as the headquarters for the combined company. Atlanta will continue to serve as a regional operating center with a strong commercial presence and remain a vital hub for technology and innovation.

Overall, Applicants expect the combination of UP and NS will have a net-positive effect on employment in the listed craft categories: Approximately 2400 positions are anticipated to be created over the first three years, with a net gain of more than 1200 positions. Applicants further anticipate that, in accordance with the requirements of 49 U.S.C. § 11326(a), the STB will impose on this merger the employee protective conditions set forth in *New York Dock Ry. – Control – Brooklyn Eastern District Terminal*, 360 I.C.C. 60, *aff'd*, *New York Dock Ry. v. United States*, 609 F.2d 83 (2d Cir. 1979).

Given the projected growth in safety-supporting positions across UP/NS, Applicants' care to avoid disrupting core safety activities during the integration process, and Applicants' unprecedented commitment to preserve employment opportunities for craft employees, there can be a high degree of confidence that the combined railroad will continue to maintain and improve its safety operations. Further, as discussed in the Training section above, the combined railroad will ensure that all safety-related positions receive necessary training. Accordingly, Applicants do not expect the combination to result in any adverse safety impacts due to personnel changes.

XIII. Capital Investments

A. Capital Investments at UP

Each year, UP makes significant investments in capital programs to enhance the service, efficiency, and safety of its network. The following table (Table 9) provides a detailed breakdown of UP's capital investments (in millions) over the period 2020 through 2024.

Table 9
UP Cash Capital Investments 2020 through 2024 (in millions)

Category	2020	2021	2022	2023	2024
Maintenance of Way	$1,832	$1,925	$1,890	$1,904	$1,933
Capacity and Commercial Facilities	$503	$527	$584	$664	$500
Locomotives and Freight Cars	$269	$322	$800	$728	$788
Technology and Other	$323	$162	$346	$310	$231
Total	$2,927	$2,936	$3,620	$3,606	$3,452

The largest portion of UP's capital investment program over the last five years, approximately $9.5 billion, was spent on maintenance of way, the majority of which was spent on replacement and renewal of depleted assets, including rail, ties, and ballast, among other assets. These investments are critical to maintain the basic safety and integrity of UP's network.

In 2025, UP invested more than $3.7 billion, consistent with the $3.4 billion it invested in 2024.

Some of UP's key safety-related capital investments include investing in safety enhancement technology, such as:

Physics Train Builder. Physics Train Builder (PTB), formerly known as Precision Train Builder, is a simulation tool used by UP's OPCC since 2023 to model and analyze the physics of train operations. This technology is used for predictive modeling and causal analysis. Specifically, PTB helps identify where to place rail cars within a train, how much "power" (*i.e.*, locomotives) to use, and where to place that power within the train. This, combined with other energy management software, reduces in-train forces that could lead to derailments. Since its implementation, PTB

has meaningfully reduced train-makeup-related derailments from an average of seven per year prior to 2020 down to one train-makeup-related over-the-road derailment in the 14 months ending December 2025.

PTB's simulation feature simulates the behavior of over 2,000 trains every day. Simulations are run before a train's departure or whenever there are updates to a train's consist. If a simulation identifies a potential derailment risk, PTB runs additional simulations until it determines a safer speed, which is then communicated to the locomotive engineer of the train.

PTB's causal analysis feature provides near real-time data on derailments on UP's mainline. This has facilitated updates to specific locations across the network, including by informing UP's implementation of various requirements concerning train makeup and operating speeds, further reducing the chances of derailment due to improper train assembly.

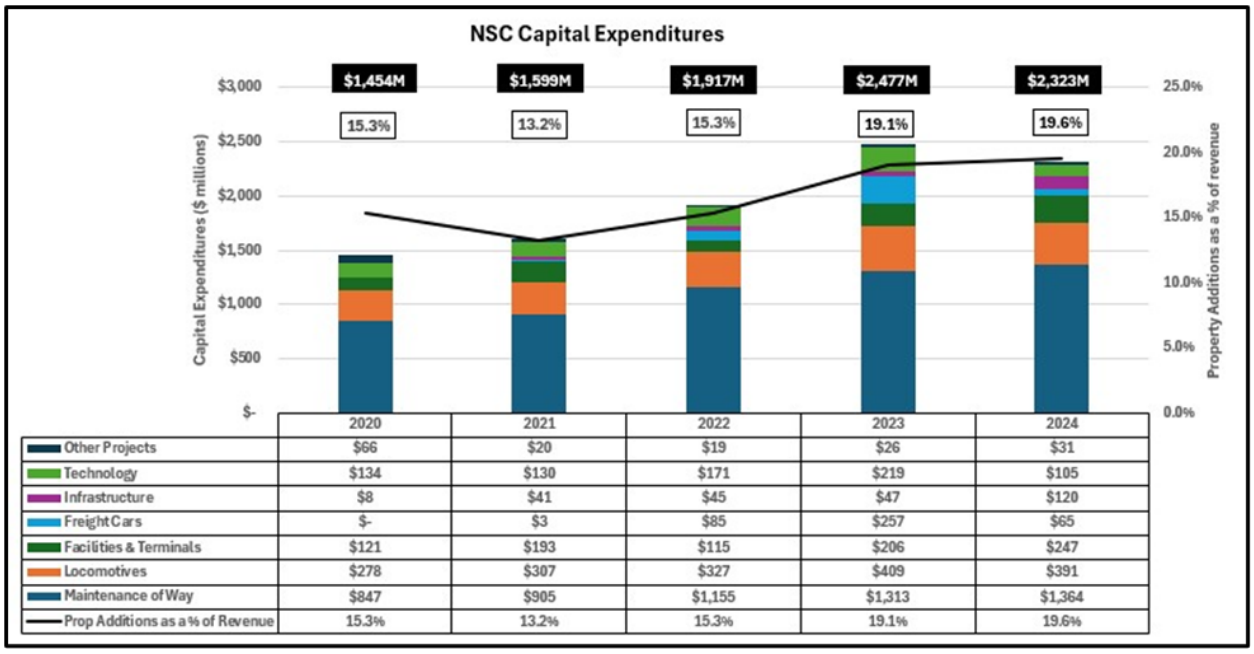
SMRT Tie Pickup. UP's Tie Pickup, performed by the SMRT, now utilizes seven high-tech maintenance of way machines, the SMRT Tie Pickups, across its 23-state network. These incredibly productive units allow UP to collect used ties quickly with a reduced on-track footprint, reducing the risk created by having humans on or near tracks. The machines also clear vegetation, collect scrap metal, and load cars with ballast, improving the safety of the network and reducing risks associated with impeded or uneven track. This highly efficient equipment has helped UP deliver industry best performance for both the volume of ties collected, as well as the cost per tie collected.

UP also uses technology to identify future safety-related investments. As discussed in greater detail in Section VIII, UP utilizes a variety of technologies to analyze rolling stock performance and track conditions. UP monitors this data for trends to help it identify critical areas of investment, and to monitor the efficacy of existing processes and investments. Specifically, UP targets investment in areas where the Risk Registry shows a static or increasing trend under a traditional failure mode and effects analysis methodology. In such cases, UP develops and implements additional mitigation strategies, such as its recent investment of more than $100 million in track improvements, including establishing the 2025 pilot mitigation program involving painting rail white in high-heat areas, which reduces the rail temperature by as much as 10 degrees.

B. Capital Investments at NS

NS makes significant investments in capital annually, significantly focused on improving safety and resiliency of the railroad. Figure 4 below shows that for the past three years, NS has invested approximately $2 billion or more per year across a range of capital investments. The largest component of the capital program is maintenance-of-way, which includes the ongoing work of tie and rail replacement and renewal and ensuring that bridges and other structures are structurally sound. The second largest capital investment component is for locomotives, which includes acquisition or capital renewal as part of the mechanical program. Part of the reason for the increase in overall capital spending was the East Palestine incident and related capital investments that followed, including increased use of wayside inspection systems.

Figure 4[9]
NS Capital Investments 2020–2024



	2020	2021	2022	2023	2024
Other Projects	$66	$20	$19	$26	$31
Technology	$134	$130	$171	$219	$105
Infrastructure	$8	$41	$45	$47	$120
Freight Cars	$-	$3	$85	$257	$65
Facilities & Terminals	$121	$193	$115	$206	$247
Locomotives	$278	$307	$327	$409	$391
Maintenance of Way	$847	$905	$1,155	$1,313	$1,364
Prop Additions as a % of Revenue	15.3%	13.2%	15.3%	19.1%	19.6%

NS collaborates with local entities to increase crossing safety including supporting those public entities in accessing grant funding to relieve the financial burden on those local entities. NS works with local agencies to get grade crossing warning device projects funded via the highway railway grade crossing safety formula (Section 130) and public funding for crossing surface improvements. NS has been involved in over twelve hundred such projects that have gone into service since 2020. These projects have significantly increased public safety without requiring the local community to bear the entire cost.

NS also partners with the public sector to seek competitive grant awards through its Public Private Partnership Activities Program. Many of these grants

[9] Capital expenditures shown here exclude certain accounting adjustments shown in financial statements. The cost of the acquisition of the Cincinnati Southern Railway is also excluded.

include safety-related benefits, such as non-Section 130 grade crossing infrastructure improvements.

C. Integration Plan

Both Applicants have a strong tradition of investing in safety enhancement technology. Applicants expect that, following the transaction, the combined UP/NS will continue to invest in safety, and will continue to leverage system-wide data to make targeted investments in infrastructure and technology that help the railroad avoid derailments and reduce other safety risks.

XIV. Information Systems Compatibility

A. Information Systems at UP

UP is an industry leader in railroad IT and employs many state-of-the-art systems to ensure efficient, safe operations. UP spends $256.6 million annually on IT, with 602 full-time equivalent employees and contractors, led by its Chief Information Officer, an Executive Vice President within the company.

UP has developed a best in class, robust transportation management system called NetControl that brought railroad system management into the 21st century. UP uses NetControl to manage multiple critical functions related to train operations on all 32,880 miles of its network, including helping UP route and track shipments, schedule and monitor its rolling stock and locomotive fleets, build and configure trains, and manage terminals. UP implemented the state-of-the-art NetControl system in 2024, making it the first Class I railroad to modernize its three core operating platforms: NetControl, CADX, and PTC.

NetControl collects and synthesizes tremendous volumes of real-time operating data and presents the data in an easily readable and accessible format that allows the operating team to be more efficient and nimble. This allows UP to be more proactive and effective. For example, NetControl allows UP to have the data at its fingertips to quickly re-route trains in response to unexpected weather conditions, helping to ensure the safety of the train crews and surrounding communities and keeping the network fluid.

NetControl is composed of five domains: (1) Shipment Management serves as the primary means of tracking, recording, and managing shipments and waybills across the UP network; (2) Equipment Management governs scheduling, tracing, and managing cycles for equipment to optimize asset use and minimize dwell time; (3) Locomotive Management helps plan locomotive deployment via monitoring, fuel tracking, and automated assignment based on demand and maintenance schedules; (4) Train Management helps optimize train configurations; and (5) Terminal Management handles rail-yard operations, intermodal, and auto facility operations, managing everything from switching activities to inbound and outbound flows.

A key feature of NetControl is that it helps ensure that hazardous materials are transported safely with embedded safety features that enforce hazardous material in-train placement rules.

NetControl is also integrated with other systems, such as those related to crew availability and locomotive and railcar inspection, maintenance, and repair. These

ensure that crews are qualified, rested, and available for service, and that rolling stock is ready for use.

As discussed previously, UP uses its CADX system for dispatching, which helps UP control train movements and ensure safety and efficiency. CADX is best in class and has two main advantages over earlier dispatching systems. First, it provides dispatching employees with more information in one location, allowing for a more comprehensive view of current operating conditions. For example, CADX allows dispatchers access to real-time track data in one integrated system. Second, CADX automates many functions that previously had to be performed manually. This allows dispatchers to focus on making decisions, rather than navigating menus.

PTC is a safety system designed to prevent train-to-train collisions, over-speed derailments, injuries to track workers from trains entering work zones, and movements of trains through switches left in the wrong position. UP has developed several related systems to manage the railway components critical to enabling PTC to function successfully. For example, UP's Track Inspection System collects vital information from FRA-mandated inspections, as well as inspections driven by UP's own internal policies.

Together, these systems provide a detailed view of current and historical movement of locomotives and freight cars. They further enable UP to quickly terminate operations in times of emergency. Along with these three core platforms, UP utilizes a variety of safety-related systems, including a centralized solution to report, investigate, and manage safety-related events, such as injuries, equipment

accidents, and grade crossing collisions. UP also uses simulation solutions to evaluate proposed train consist configurations. By simulating a train's journey from origin to destination, the system assesses whether the locomotive and consist configuration can safely traverse the route, allowing teams to proactively identify and mitigate risks before actual operations begin. Additionally, UP uses proprietary software to monitor the force build-up in trains that can cause derailments.

UP also has policies for ensuring IT system reliability and availability. UP undertakes significant effort to minimize the possibility of cybersecurity-related risk. The railroad uses a formal risk assessment methodology that puts a priority on identifying all potential risks and quantifying them to the extent possible. UP's methodologies are drawn from guidance from leading government agencies and nonprofits, such as the National Institute of Standards and Technology and the Center for Internet Security. UP is fully compliant with the Transportation Security Administration Cybersecurity Directive requirements and actively participates in the rail industry's cybersecurity efforts through the Rail Information Security Committee. UP engages with government agencies for threat intelligence and cybersecurity briefings. Additionally, UP has a commitment to continuous improvement, including through outside support when appropriate. Third parties are frequently engaged to assess and recommend security program improvements. UP continues to invest in technology that leads the rail and logistic industry.

UP has also established incident response plans for IT-related service interruptions. These plans initiate at defined trigger points, and activate resolution,

escalation, and communication processes. UP has also established disaster recovery capabilities designed to ensure rapid recovery from physical facility and technical failures.

Business resumption plans are in place as well to sustain transportation services while technical teams recover affected systems, ensuring that essential services continue uninterrupted. In extreme cases of complete IT unavailability, procedures are in place to direct operations with non-digital methods, as UP did before the invention of the computer. These plans are routinely tested to validate their effectiveness and ensure all stakeholders are prepared to respond.

B. Information Systems at NS

NS's information systems are headed by an Executive Vice President and Chief Information and Digital Officer, who has six substantive direct reports (Assistant Vice Presidents over Information Technology, Software Engineering, Information Technology Operations, Enterprise Data and Analytics, Digital and Technology Strategy, and a Chief Information Security Officer). Information systems permeate all aspects of a safe and modern railroad. Effective use of IT and systems improves safety across all aspects of railroading.

NS IT systems largely correspond with those of UP; that is, each core transportation system performs a function similar to its counterpart at the other railroad. Among others, NS has IT systems that build trains, track them in the field, dispatch them, and manage transportation of hazardous materials.

NS's Train Management systems facilitate building, managing, and monitoring train configurations. When building trains, NS utilizes defined rules and

physics algorithms to select optimized locomotive and car combinations that will ensure safety and reduce the risk of operational issues. NS simulates train consists against their projected route to check for potential safety issues.

NS ingests and correlates railcar, locomotive, and train movements data from multiple information systems that enable real-time tracking and field operations decisions. Mobile Train Reporting applications on mobile devices allow train crews to monitor issues, including alerts related to consist discrepancies (when scanners indicate missing or extra equipment); unauthorized car movements by held cars; wayside detector alerts; or when there are HHFT.

As described above, NS uses UTCS for dispatching. That includes an integrated core dispatching system called Precision Dispatch System for the command-and-control system at the heart of railroad operations. The system is designed to safely and efficiently move trains across the network in both signaled and dark territory, provide full visibility of network conditions, and monitor all devices across the network. Movement Planner is an overlay that provides for optimal routing.

As noted in the Hazmat section above, several tools are used to safely manage trips involving hazardous materials. That includes the RCRMS, a risk management program to analyze and identify the safest routes for transporting hazardous materials. That also includes the Incident Action Plan Program, which is used for incident response when necessary. As also described above, train crews receive alerts if they have HHFT trains. NS also tracks hazardous equipment and toxic inhalation

hazard cars in different colors, a simple step that raises awareness and increases visibility of these trains.

NS uses PTC, which is now an industrywide standard and requirement to prevent train-to-train collisions, over-speed actions, and unauthorized train movements. The system can automatically and autonomously halt a train before certain incidents can occur and avoids human error.

NS also has additional IT safety systems, including those that facilitate incident management and reporting, as well as policies for ensuring the reliability of IT systems.

As with all industries, cybersecurity is an area of growing importance for NS. The cybersecurity approach NS employs is aligned with industry best practices and is focused on preventing cyber-attacks, as well as effectively detecting, responding to, and recovering from unforeseen events. NS is compliant with all applicable laws and regulations and has systems and processes in place to ensure safe, reliable, and resilient operations.

C. Integration Plan

Applicants are committed to, and are actively executing, a careful, coordinated process to ensure that their IT systems will be integrated safely and without interruption. Applicants have already completed a detailed assessment of their respective railroad IT operations. The assessment shows that Applicants' IT systems largely correspond with one another and are organized similarly. That is, each core transportation system performs a similar function to its counterpart at the other railroad. These similarities will aid in integration.

On day one, and in the early phases of merger integration, the legacy UP and NS systems will continue operating with separate IT systems. Applicants expect that UP/NS will then execute IT integration in phases, starting with interim measures to quickly enable the flow of information between the two parts of the combined system.

Applicants anticipate that a key initial step, to be executed in the first phase, will be for the legacy UP and NS to create visibility into each railroad's existing systems, meaning that each will be able to access the data and understand the current status of operations of the other. This immediate step will allow the two legacy IT organizations to safely and efficiently operate the combined railroad. This step will also provide further opportunity for the two IT organizations to familiarize themselves with each other's IT environments, laying the groundwork for seamless collaboration.

In parallel, Applicants anticipate that legacy UP and NS staff will migrate each company's data into a single storage facility so that data from both parts of the combined system can be reviewed simultaneously. This approach will enable real-time monitoring of nationwide train movements, and the availability of key resources.

In subsequent phases, Applicants expect that the legacy UP and NS staffs will deepen integration. Applicants anticipate that the legacy staffs of each railroad will begin to coordinate and integrate their IT policies and procedures, starting with traditional IT operations and support functions such as system administration, network management, help-desk services, and ongoing maintenance, along with cybersecurity and incident response activities.

Applicants will define in advance key metrics to track system health and service so that, when cutover occurs, UP/NS staff can monitor success in real time. Applicants anticipate that these metrics will include not only traditional indicators of system performance and availability, but also the ongoing monitoring of the number of trouble tickets with defects reported throughout the implementation. By tracking these issues closely, UP/NS will be able to identify any emerging problems, assess the effectiveness of mitigation strategies, and ensure that any disruptions are addressed promptly to maintain high service standards.

Applicants expect that legacy UP and NS staff will follow a defined process for selecting and conducting further integration, with comprehensive testing and validation to ensure the integrated system performs as expected. Applicants anticipate that systems of the legacy railroads will be transitioned incrementally where possible to minimize risk, with appropriate training for stakeholders. Applicants anticipate that legacy UP and NS employees will assess and determine how to best employ IT safety systems across the entire system. For example, Applicants anticipate that UP's existing train and locomotive simulation tools will ultimately cover the entire unified network. Applicants also anticipate that legacy UP and NS employees will coordinate, before ultimately integrating, the incident reporting systems of the legacy railroads. Applicants also plan to continue to operate their respective and effective systems for performing certification functions until those systems are integrated into one system. During that time, UP's engineer and

conductor licensing team will be the primary contact providing top-level oversight for regulatory compliance with regard to licensing.

Applicants anticipate that, in some cases, interim solutions will be adopted before the transition until the intended end state is complete. Applicants anticipate that the combined railroad will reach the intended end state for IT systems within approximately three years after the transaction is consummated. Applicants expect that the combined railroad will have best-in-class IT systems that enable safe, reliable operations throughout the entire, combined network.

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. FD 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY
—CONTROL—
NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN
RAILWAY COMPANY

APPENDIX 1
SAFETY INTEGRATION PLAN TIMELINE
AND ACCOUNTABILITIES CHART

Appendix 1

SIP Timeline and Accountabilities Chart

Table of Contents

Glossary

Term	Definition
Control Date	Day that control authority is consummated
Year 1	The first year after the Control Date
Year 2	The second year after the Control Date
Year 3	The third year after the Control Date
H1	First half of the year
H2	Second half of the year
Pre-Closing	Prior to the Control Date

CORPORATE CULTURE				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
A.1	Conduct risk-based hazard analysis	H1 Year 1	Year 3	• Safety
A.2	Review and consolidate safety management systems	H1 Year 1	Year 3	• Safety
A.3	Review and consolidate risk reduction plan	H1 Year 1	Year 3	• Safety
A.4	Review and consolidate employee feedback programs	H1 Year 1	Year 3	• Safety
A.5	Implement C3RS	TBD (subject to final agreement with the FRA)	TBD (subject to final agreement with the FRA)	• Safety
A.6	Review and consolidate safety department structure	H1 Year 1	H1 Year 2	• Safety

TRAINING				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
B.1	Establish dedicated committees, councils, and work groups responsible for integrating training	Pre-Closing	H1 Year 1	• Training
B.2	Review NS training approaches to identify best-in-class training features to include in integrated training program	Pre-Closing	Year 2	• Training
B.3	Phase in training on UP operating rules and operating systems	H1 Year 1	H2 Year 1	• Training
B.4	Implement UP training applications and platforms across NS systems	Year 2	Year 3	• Training
B.5	Educate NS trainers on changes to the training program	H1 Year 1	Year 3	• Training
B.6	Consolidate training programs	Year 1	Year 3	• Training
B.7	Ensure employees receive required training	Ongoing	Ongoing	• Training
B.8	Make appropriate regulatory submissions and seek regulatory approval for training changes as needed	Ongoing	Ongoing	• Training

OPERATING PRACTICES				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
Operating Rules				
C.1.a	Review operating rules and practices to determine best fit for the combined practice	Pre-Closing	H1 Year 1	• Operating Rules and Practices
C.1.b	Develop process for communicating rule and policy changes	Pre-Closing	H2 Year 1	• Operating Rules and Practices • Training
C.1.c	Consolidate rulebooks and instructions, which will include the General Code of Operating Rules	H1 Year 1	H2 Year 1	• Operating Rules and Practices
C.1.d	Implement uniform set of operating rules and practices across the combined company	H1 Year 1	H2 Year 1	• Operating Rules and Practices
C.1.e	Align training program with uniform operating rules	H1 Year 1	Year 3	• Operating Rules and Practices • Training
C.1.f	Communicate rule and policy changes to employees to ensure familiarity with any new rules or practices	H1 Year 1	Ongoing	• Operating Rules and Practices • Training
C.1.g	Provide training	H1 Year 1	Ongoing	• Operating Rules and Practices • Training
C.1.h	Monitor rules performance	H1 Year 1	Ongoing	• Operating Rules and Practices

OPERATING PRACTICES				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
	throughout integration process and make necessary adjustments			
C.1.i	Review and consolidate operational testing programs	Year 1	Year 3	• Operating Rules and Practices
Alcohol and Drug				
C.2.a	Review drug and alcohol programs	Year 1	Year 2	• Drug & Alcohol
C.2.b	Consolidate drug and alcohol programs	Year 1	Year 2	• Drug & Alcohol
C.2.c	Train employees on program and applicable regulations	Year 1	Ongoing	• Drug & Alcohol • Training
Qualification and Certification				
C.3.a	Review 49 C.F.R. Part 240 and Part 242 programs	Year 1	Year 2	• Operating Practices • Training
C.3.b	Consolidate 49 C.F.R. Part 240 and Part 242 programs	Year 1	Year 3	• Operating Practices • Training
C.3.c	File consolidated 49 C.F.R. Part 240 and Part 242 programs if needed	Year 3	Year 3	• Operating Practices • Training

OPERATING PRACTICES				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
Hours of Service				
C.4.a	Review HOS programs and processes	Year 1	Year 2	• Crew Management • Signals and Communication • Dispatching
C.4.b	Consolidate HOS programs and processes, including transitioning NS dispatchers to UP's digital preventative HOS compliance program	Year 1	H2 Year 3	• Crew Management • Signals and Communication • Dispatching
C.4.c	Maintain compliance with federal regulation	Ongoing	Ongoing	• Crew Management • Signals and Communication • Dispatching

MOTIVE POWER AND EQUIPMENT				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
D.1	Evaluate the mechanical needs of the combined network for repair and service locations and equipment	Pre-Closing	Ongoing	• Mechanical
D.2	Implement changes as needed to the mechanical needs of the combined network for repair and service locations and equipment.	Year 1	Ongoing	• Mechanical
D.3	Perform review of qualification programs to identify differences	Year 1	Year 2	• Mechanical • Training
D.4	Consolidate qualification programs	Year 1	Year 3	• Mechanical • Training
D.5	Provide training	Year 2	Ongoing	• Mechanical • Training

SIGNAL AND TRAIN CONTROL SYSTEMS				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
E.1	Review processes, standards, and systems	Pre-Closing	Year 1	• Signals and Communication • Dispatching • Mechanical • Information Systems
E.2	Create detailed integration plan	H1 Year 1	Year 2	• Signals and Communication • Dispatching • Mechanical • Information Systems
E.3	Integrate signal and train control systems and PTC back office systems	H1 Year 1	Year 3	• Signals and Communication • Dispatching • Mechanical • Information Systems
E.4	Meet with the FRA to demonstrate compliance with regulatory requirements	Year 1	Ongoing (as needed)	• Signals and Communication
E.5	Provide training	Year 2	Ongoing	• Signals and Communication • Training

TRACK SAFETY STANDARDS AND BRIDGE STRUCTURES				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
F.1	Review assets and programs related to bridges and structures	Pre-Closing	H1 Year 1	• Engineering
F.2	Integrate programs and assets related to bridges and structures	H1 Year 1	Year 3	• Engineering
F.3	Review asset and programs related to track infrastructure	Upon Approval	Year 3	• Engineering
F.4	Integrate programs and assets related to track infrastructure	H1 Year 1	Year 3	• Engineering
F.5	Provide training	H1 Year 1	Year 3	• Engineering • Training

HAZARDOUS MATERIALS				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
G.1	Review hazardous materials programs	Pre-Closing	H1 Year 1	• Hazardous Materials Management
G.2	Integrate NS hazardous materials staff into UP organizational structure and monitor staffing levels	Year 1	Year 2	• Hazardous Materials Management
G.3	Review and integrate NS's hazardous materials inspection program into UP's prevention program	Year 1	Year 2	• Hazardous Materials Management
G.4	Review and consolidate hazardous materials and related emergency response training into a single training program	H1 Year 1	H2 Year 1	• Hazardous Materials Management • Training
G.5	Consolidate training equipment fleets into a single fleet	Year 1	Year 2	• Hazardous Materials Management
G.6	Review emergency response plan and other contingency plans	Pre-Closing	Year 1	• Hazardous Materials Management
G.7	Consolidate emergency response plan and other contingency plans	H1 Year 1	H2 Year 1	• Hazardous Materials Management
G.8	Review and incorporate NS's third-party contractors into	Year 1	Year 2	• Hazardous Materials Management

HAZARDOUS MATERIALS				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
	emergency response network			
G.9	Integrate all emergency response assets and adopt UP's maintenance and inspection program	Year 1	Year 2	• Hazardous Materials Management
G.10	Review and consolidate USHMI	Year 1	Year 2	• Hazardous Materials Management
G.11	Review and integrate hazardous material documentation systems and processes	Year 1	H1 Year 3	• Hazardous Materials Management • Information Systems
G.12	Review and integrate regulatory reporting systems and processes	Year 1	Year 3	• Hazardous Materials Management • Information Systems
G.13	Continue use of AskRail	Ongoing	Ongoing	• Hazardous Materials Management • Information Systems
G.14	Review and integrate testing programs that evaluate compliance with operating requirements related to hazardous materials	Year 1	Year 3	• Hazardous Materials Management • Operating Rules and Practices

DISPATCHING OPERATIONS				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
H.1	Review dispatching rules and procedures	Pre-Closing	Year 1	• Dispatching
H.2	Consolidate dispatching rules and procedures	H1 Year 1	H2 Year 1	• Dispatching
H.3	Evaluate train dispatcher operating systems	Pre-Closing	Year 1	• Dispatching • Information Systems
H.4	Select primary application for train dispatcher operating systems	H1 Year 1	H2 Year 1	• Dispatching • Information Systems
H.5	Implement selected application across entire system	H1 Year 3	Year 3+	• Dispatching • Information Systems
H.6	Provide training or certification as needed	H1 Year 1	Ongoing	• Dispatching • Training

HIGHWAY-RAIL GRADE CROSSING SYSTEMS				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
I.1	Review programs and practices for crossing safety and blocked crossings	Pre-Closing	Year 1	• Safety
I.2	Consolidate program and implement across the combined system	Year 1	Year 3	• Safety
I.3	Coordinate with authorities, as needed	Ongoing	Ongoing	• Safety

PERSONNEL STAFFING				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
J.1	Review personnel staffing	Pre-Closing	Pre-Closing	• Labor
J.2	Create and implement detailed personnel staffing plan consistent with number of safety-related positions to be created, transferred, or abolished per the personnel staffing review	Year 1	Year 3	• Labor
J.3	Monitor personnel staffing and safety needs and adjust personnel staffing plan as needed	Year 1	Ongoing	• Labor

CAPITAL INVESTMENTS				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
K.1	Maintain investments in safety and continue leveraging data to identify opportunities for future investments	Ongoing	Ongoing	• Safety

INFORMATION SYSTEMS COMPATIBILITY				
Item	**Description**	**Estimated Start**	**Estimated Completion**	**Resource Allocation**
L.1	Review information systems and operations	Pre-Closing	Control Date	• Information Systems
L.2	Coordinate and integrate IT policies	Year 1	Year 3	• Information Systems
L.3	Integrate information systems	Year 1	H2 Year 3	• Information Systems
L.4	Monitor success of integration and promptly address any issues	Year 1	H2 Year 3	• Information Systems
L.5	Perform comprehensive testing and validation of integrated system	Year 1	H2 Year 3	• Information Systems
L.6	Train key stakeholders on information systems	Year 1	H2 Year 3	• Information Systems

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. FD 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY
—CONTROL—
NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN
RAILWAY COMPANY

APPENDIX 2
UP AND NS QUIET ZONE CROSSINGS FOR WHICH TRAIN TRAFFIC IS MODELED TO INCREASE

Appendix 2

UP and NS Quiet Zone Crossings for Which Train Traffic Is Modeled to Increase

DOT#	Street	Subdivision	Milepost
746913E	Fairway Drive	Alhambra	0505.780
746915T	South Lemon Avenue	Alhambra	0506.640
746916A	Brea Canyon Road	Alhambra	0507.960
746925Y	Hamilton Boulevard	Alhambra	0513.580
746927M	Park Avenue	Alhambra	0514.100
746928U	Main Street	Alhambra	0514.230
746930V	Palomares Street	Alhambra	0514.660
746932J	San Antonio Avenue	Alhambra	0515.170
448606J	South Velasco Street	Angleton	0320.280
448609E	Anderson Street	Angleton	0320.720
448610Y	East Orange Street	Angleton	0320.820
448611F	South Downing Road	Angleton	0321.220
448612M	Cedar Street	Angleton	0321.530
448613U	County Road 428	Angleton	0321.850
719820N	Angham Road	Atlanta North	0128.090
719821V	Finch Rd	Atlanta North	0128.260
719822C	Huddleston Dr	Atlanta North	0128.590
719824R	Brownsville Rd	Atlanta North	0129.730
719827L	Oglesby Rd	Atlanta North	0131.190
718397A	Valley Hill Rd	Atlanta South	0170.650
718399N	Love Street	Atlanta South	0171.390
415508B	Riverside Drive	Austin	0209.250
415541B	Lakeview Boulevard	Austin	0225.610
415543P	North Houston Avenue	Austin	0225.830
415544W	North Union Avenue	Austin	0225.920
415545D	West Torrey Street	Austin	0226.220
415547S	Hinman Island Drive	Austin	0226.560
415560F	Guenther Avenue	Austin	0227.300
415561M	Santa Clara Avenue	Austin	0227.400
415562U	North Walnut Avenue	Austin	0227.640
415563B	North Hickory Avenue	Austin	0227.760
415564H	Live Oak Avenue	Austin	0228.080

DOT#	Street	Subdivision	Milepost
415565P	Grape Street	Austin	0228.350
415566W	Krueger Avenue	Austin	0228.680
432486X	Green Mountain Road	Austin	0243.600
432487E	Judson Road	Austin	0244.780
432488L	Oconnor Road	Austin	0245.770
432489T	Classen Road	Austin	0246.330
432490M	Jung Road	Austin	0246.710
432491U	Stahl Road	Austin	0247.730
432492B	Thousand Oaks	Austin	0248.020
848306A	Broadway Street	Austin	0250.390
432499Y	Mcarthur View	Austin	0250.630
432501X	Sunset Road	Austin	0253.050
432502E	Jones Maltsberger Road	Austin	0253.690
432503L	Basse Road	Austin	0254.590
432505A	Mccullough Avenue	Austin	0255.100
432507N	Dora Street	Austin	0255.610
432508V	West Olmos Park Drive	Austin	0255.860
432510W	West Hildebrand Avenue	Austin	0256.230
432511D	West Hollywood Avenue	Austin	0256.420
432512K	West Elsmere Street	Austin	0256.560
432514Y	West Kings Highway	Austin	0256.760
432515F	West Summit Avenue	Austin	0256.830
432516M	West Magnolia Avenue	Austin	0257.090
432517U	West Mistletoe Avenue	Austin	0257.160
432518B	West Woodlawn Avenue	Austin	0257.230
432519H	West Craig Avenue	Austin	0257.300
432520C	West Russell Place	Austin	0257.360
432521J	Ashby Place	Austin	0257.490
432522R	Hickman Street	Austin	0257.690
432531P	Arbor Place	Austin	0258.570
432532W	Ruiz Street	Austin	0258.672
432534K	Leal Street	Austin	0258.780
432535S	Hardberger Way	Austin	0258.900
432537F	West Martin Street	Austin	0259.070
848267L	River Bend Boulevard	Baird	0252.640
839214N	Fm 1187 Northbound	Baird	0263.936

DOT#	Street	Subdivision	Milepost
440627A	Fm 1187 Southbound	Baird	0264.050
448245G	Water Works Boulevard	Beaumont	0388.940
427964K	Keith Road	Beaumont	0453.650
427963D	Todd Road	Beaumont	0453.680
427962W	Major Drive/Fm 364	Beaumont	0454.910
446592W	Coburn Drive	Beaumont	0455.680
446593D	Pinchback Road	Beaumont	0456.020
191674U	River Road	Blair	0341.170
191676H	North 10th Street	Blair	0342.070
191677P	North 12th Street	Blair	0342.230
191678W	North 16th Street	Blair	0342.570
191682L	North 23rd Street	Blair	0343.160
468558B	Berkley Road	Blue Ridge	0254.330
468561J	Lee Avenue	Blue Ridge	0255.200
468563X	Eighth Street	Blue Ridge	0255.670
468565L	Hollins Road	Blue Ridge	0256.490
469382W	Union Street	Blue Ridge	0264.710
470700C	Mccelland Street	Blue Ridge	0265.080
469385S	Mill Lane	Blue Ridge	0265.920
469386Y	Salem Industrial Drive	Blue Ridge	0266.980
469387F	Diuguids Lane	Blue Ridge	0267.440
469432X	Cambria Street	Blue Ridge	0290.200
190300K	Story Street	Boone	0202.970
190301S	Greene Street	Boone	0203.150
190305U	Crawford Street	Boone	0203.330
190307H	Division Street	Boone	0203.670
190309W	Marion Street	Boone	0204.180
190321D	Northeast 3rd Street	Boone	0210.880
190322K	North 1st Street	Boone	0211.020
190324Y	Northwest 4th Street	Boone	0214.170
190325F	North West 7th Street	Boone	0214.390
190991V	South 15th Street	Boone	0286.130
190992C	South Main Street	Boone	0286.310
176081P	Martin Luther King Jr Boulevard	Carrizozo	0886.530
741165T	North Piedras Street	Carrizozo	0967.350
741160J	Rosewood Street	Carrizozo	0967.800

DOT#	Street	Subdivision	Milepost
715290M	Kerr Street	Charlotte	0333.570
715289T	Council Street	Charlotte	0333.770
715284J	Monroe Street	Charlotte	0334.190
724374G	Webb Road	Charlotte	0340.080
724382Y	Church Street	Charlotte	0342.860
724384M	Centerview Street	Charlotte	0343.210
724394T	Ryder Avenue	Charlotte	0345.650
724398V	Twenty-Second Street	Charlotte	0347.280
724399C	Eighteenth Street	Charlotte	0347.590
724404W	First Street	Charlotte	0349.070
724408Y	Rogers Lake Road	Charlotte	0350.770
715339U	Back Creek Church Road	Charlotte	0367.550
715343J	Mclean Road	Charlotte	0369.310
716226S	Trenton Street	Charlotte	0399.890
716652A	Cleveland Street	Charlotte	0456.470
412805J	Appleton Street	Cherokee	0386.970
412807X	Southern Boulevard	Cherokee	0387.610
523835H	Lewis Road	Chicago Line	0196.090
523836P	Columbia Road	Chicago Line	0196.340
523837W	Brookside Drive	Chicago Line	0196.520
523838D	Mapleway Drive	Chicago Line	0196.760
523844G	Chestnut Ridge Road	Chicago Line	0201.350
523845N	Root Road	Chicago Line	0201.640
523847C	Maddock Road	Chicago Line	0203.100
523848J	Race Road	Chicago Line	0203.770
523864T	West Ridge Road	Chicago Line	0210.270
523866G	Oberlin Road	Chicago Line	0211.630
523868V	Dewey Road	Chicago Line	0212.330
523878B	Crosse Road	Chicago Line	0215.450
523879H	Cooper Foster Park Road	Chicago Line	0215.690
524040W	Main Street	Chicago Line	0220.970
524041D	Grand Street	Chicago Line	0221.050
524045F	Adams Street	Chicago Line	0221.690
509463J	Holloway Road	Chicago Line	0297.410
522522P	Elder Road	Chicago Line	0429.210
522523W	Oakside Avenue	Chicago Line	0429.610

DOT#	Street	Subdivision	Milepost
522524D	Kline Street	Chicago Line	0429.970
522527Y	Delorenzi Avenue	Chicago Line	0430.830
522528F	Beiger Street	Chicago Line	0431.080
522529M	Byrkit Avenue	Chicago Line	0431.450
522530G	Merrifield Avenue	Chicago Line	0431.960
522531N	Laurel Street	Chicago Line	0432.190
522533C	Main Street	Chicago Line	0432.650
522534J	Spring Street	Chicago Line	0432.790
522535R	West Street	Chicago Line	0432.930
522537E	Smith Street	Chicago Line	0433.200
522538L	Logan Street	Chicago Line	0433.470
522539T	Hendricks Street	Chicago Line	0433.640
522540M	Carlton Street	Chicago Line	0433.870
522541U	Russell Avenue	Chicago Line	0434.200
522543H	Robinson Street	Chicago Line	0434.790
522544P	Caroline Street	Chicago Line	0434.900
522545W	Twyckenham Drive	Chicago Line	0434.970
522546D	Vernon Street	Chicago Line	0435.060
522547K	Leer Street	Chicago Line	0435.240
522562M	Olive Street	Chicago Line	0438.280
522563U	Meade Street	Chicago Line	0438.450
949334H	Station Walkway	Chicago Line	0438.520
522564B	Grandview Avenue	Chicago Line	0439.740
522593L	Boston Street	Chicago Line	0462.470
522594T	Pulaski Street	Chicago Line	0462.870
522595A	Tipton Street	Chicago Line	0462.970
522596G	Detroit Street	Chicago Line	0463.150
522597N	Madison Street	Chicago Line	0463.510
522599C	Tyler Street	Chicago Line	0463.690
522601B	Weller Avenue	Chicago Line	0464.540
522602H	Orchard Avenue	Chicago Line	0464.820
156099V	Front Street	Chicago Line	0505.610
156098N	One Hundred Seventeenth Street	Chicago Line	0505.980
795430F	Westport Parkway	Choctaw	0737.485
795349T	Keller Haslet Road	Choctaw	0738.100
849071V	Bear Creek Road	Choctaw	0740.720

DOT#	Street	Subdivision	Milepost
795356D	Wall Price Keller Road	Choctaw	0741.376
795357K	Kroger Drive	Choctaw	0741.740
795359Y	North Tarrant Parkway	Choctaw	0742.890
795360T	Basswood Boulevard	Choctaw	0744.340
795361A	Watauga Road	Choctaw	0745.277
503541T	Stow Road	Cleveland Line	0094.820
503034K	Hines Hill Road	Cleveland Line	0099.600
503033D	Twinsburg Road	Cleveland Line	0101.260
190472T	North 8th Avenue	Clinton	0066.150
190692N	10th Street	Clinton	0180.240
190693V	8th Street	Clinton	0180.380
190694C	6th Street	Clinton	0180.520
190695J	2nd Street	Clinton	0180.800
190703Y	Kellogg Avenue	Clinton	0188.740
190706U	North Hazel Avenue	Clinton	0189.415
190711R	Scholl Road	Clinton	0191.550
190712X	North Dakota Avenue	Clinton	0192.240
422991P	Kenneth Road	Coffeyville	0299.970
422992W	West 151st Street	Coffeyville	0300.370
422994K	West 159th Street	Coffeyville	0301.530
816795Y	Cr 18	Columbus	0043.780
794946W	South Bagdad Road	Dallas	0224.555
794951T	Southeast 14th Street	Dallas	0225.518
848276K	Southeast 9th Street	Dallas	0225.860
794952A	Fm 1382 S Belt Line Rd	Dallas	0225.930
794954N	South Center Street	Dallas	0226.443
794955V	Dolores Huerta	Dallas	0226.535
924109U	Tx 161 Frontage North	Dallas	0227.434
924108M	Tx 0161 Frontage South	Dallas	0227.490
794960S	Southwest 19th Street	Dallas	0228.010
794961Y	Southwest Twenty Third Street	Dallas	0228.388
794974A	Stadium Drive	Dallas	0231.270
794975G	North Collins Street	Dallas	0232.090
794977V	South Mesquite Street	Dallas	0232.590
794978C	North Center Street	Dallas	0232.670
794980D	Fm0157 / North Cooper Street	Dallas	0233.100

DOT#	Street	Subdivision	Milepost
794981K	North Davis Drive	Dallas	0233.610
794984F	North Bowen Road	Dallas	0235.160
794989P	Handley Drive	Dallas	0239.230
794995T	South Tierney Road	Dallas	0240.840
794996A	S Hughes Avenue	Dallas	0241.550
794997G	Oakland Boulevard	Dallas	0241.860
794998N	South Ayers Avenue	Dallas	0242.390
527974S	S Burnett Road	Dayton	0180.950
527973K	Burt Street	Dayton	0181.830
527972D	East Street	Dayton	0182.330
527971W	York St	Dayton	0182.600
527969V	Linden St	Dayton	0182.880
527967G	Limestone St	Dayton	0183.150
523485T	Fountain Ave	Dayton	0183.240
523486A	Center St	Dayton	0183.350
523488N	Wittenberg St	Dayton	0183.460
523490P	Lowry St	Dayton	0183.560
523494S	S Yellow Springs	Dayton	0183.740
523496F	West High Street	Dayton	0183.890
523498U	Shaffer St	Dayton	0184.010
523500T	Western Ave	Dayton	0184.180
523501A	Main St	Dayton	0184.260
523504V	Bechtle Ave	Dayton	0184.510
523506J	Synder St	Dayton	0184.940
523507R	Main Street	Dayton	0185.020
764370N	Burleson Street	Del Rio	0208.520
764371V	Lamar Street	Del Rio	0208.609
764372C	Burnet Street	Del Rio	0208.782
764373J	Dawson Street	Del Rio	0208.960
764374R	East Houston Street	Del Rio	0209.045
764375X	Crockett Street	Del Rio	0209.133
764376E	Center Street	Del Rio	0209.220
764377L	East Commerce Street	Del Rio	0209.290
764295E	South Presa Street	Del Rio	0210.800
764298A	Probandt Texas 536	Del Rio	0211.586
764300Y	South Flores Street	Del Rio	0212.080

DOT#	Street	Subdivision	Milepost
764302M	South San Marcos Street	Del Rio	0212.540
764303U	South Brazos Street	Del Rio	0212.770
764305H	South Zarzamora Street	Del Rio	0213.640
764307W	Merida Street	Del Rio	0213.710
764308D	Ceralvo Street	Del Rio	0213.914
764311L	Brady Boulevard	Del Rio	0214.260
477180U	Liberty Street	Frankfort	0173.960
474547C	Council Street	Frankfort	0174.080
474801C	Concord Road	Frankfort Branch	0254.260
474809G	Eighteenth Street	Frankfort Branch	0255.340
474810B	Ninth Street	Frankfort Branch	0255.900
474811H	Beck Lane	Frankfort Branch	0256.380
474812P	Poland Hill Road	Frankfort Branch	0256.510
761735H	14th Avenue	Fresno	0042.590
752887F	Power Inn Road	Fresno	0043.340
752761Y	Fruitridge Road	Fresno	0043.640
752752A	Calvine Road	Fresno	0048.860
752751T	Sheldon Road	Fresno	0049.900
752750L	Elk Grove Florin Road	Fresno	0050.600
752749S	Bond Road	Fresno	0050.950
752748K	Elk Grove Boulevard	Fresno	0051.980
752742U	Elm Avenue	Fresno	0062.570
752739L	F Street	Fresno	0063.500
752738E	Kost Road	Fresno	0064.130
752908W	Morada Ln	Fresno	0078.320
415974G	East Eldred Street	Ft. Worth	0236.650
415973A	East Ellison Street	Ft. Worth	0236.770
415972T	West Renfro Street	Ft. Worth	0236.830
415970E	Commerce Street	Ft. Worth	0237.280
415968D	Mcalister Road	Ft. Worth	0238.820
415961F	Sycamore School Road	Ft. Worth	0243.240
900238R	Pineloch Drive	Galveston	0017.510
859602S	El Dorado Boulevard	Galveston	0018.290
173998Y	North 5th Avenue	Geneva	0010.470
174001M	9th Avenue	Geneva	0010.760
174009S	South 19th Avenue	Geneva	0011.380

DOT#	Street	Subdivision	Milepost
174341Y	Wolf Road	Geneva	0013.750
174020S	Poplar Avenue	Geneva	0015.160
174021Y	Haven Road	Geneva	0015.490
174022F	York Street	Geneva	0015.670
174023M	Cottage Hill Avenue	Geneva	0015.790
174024U	Maple Avenue	Geneva	0015.900
174025B	Myrtle Avenue	Geneva	0016.130
174933J	South West Avenue	Geneva	0016.650
174935X	Villa Avenue	Geneva	0017.150
174937L	North Ardmore Avenue	Geneva	0017.670
174938T	North Addison Avenue	Geneva	0018.160
174939A	Grace Street	Geneva	0019.260
174944W	South Elizabeth Street	Geneva	0020.110
174945D	South Finley Road	Geneva	0020.450
174948Y	North Park Boulevard	Geneva	0022.280
174950A	North Main Street	Geneva	0022.480
174951G	Prospect Avenue	Geneva	0022.670
174952N	College Road	Geneva	0023.780
174953V	North President Street	Geneva	0023.990
174955J	Washington Street	Geneva	0024.470
174956R	Cross Street	Geneva	0024.690
174957X	Main Street	Geneva	0024.765
174958E	South Hale Street	Geneva	0024.850
174923D	South Wheaton Avenue	Geneva	0024.940
174924K	South West Street	Geneva	0025.020
174964H	Winfield Road	Geneva	0027.580
174965P	Sunset Avenue	Geneva	0028.840
174972A	Wood Street	Geneva	0030.240
174973G	Washington Street	Geneva	0030.280
174991E	Third Street	Geneva	0035.490
174998C	Western Avenue	Geneva	0036.090
175008N	First Street	Geneva	0043.880
175009V	Main Street	Geneva	0043.940
175018U	Howard Road	Geneva	0049.100
175019B	Liberty Street	Geneva	0050.490
175020V	Pleasant Street	Geneva	0050.640

DOT#	Street	Subdivision	Milepost
175021C	County Line Road	Geneva	0050.730
175023R	Pritchard Road	Geneva	0051.740
175025E	Llanos Street	Geneva	0055.130
175027T	South Somonauk Road	Geneva	0055.280
175028A	Loves Road	Geneva	0055.840
175029G	10th Street	Geneva	0058.060
175039M	North 7th Street	Geneva	0058.280
175041N	6th Street	Geneva	0058.360
175042V	Lincoln Hwy And 4th	Geneva	0058.510
175043C	South 3rd Street	Geneva	0058.590
175044J	South 2nd Street	Geneva	0058.680
175045R	South 1st Street	Geneva	0058.760
176396T	Caron Drive	Geneva	0074.250
175119F	North Main Street	Geneva	0074.800
175120A	North Washington Street	Geneva	0074.860
175122N	North 9th Street	Geneva	0075.110
175123V	First Avenue	Geneva	0075.420
175196F	Sawyer Road	Geneva	0122.890
175198U	Cherry Street/Il 78	Geneva	0123.770
175199B	Genesee Street	Geneva	0123.830
175200T	Orange Street	Geneva	0123.960
175201A	North Heaton Street	Geneva	0124.250
765820L	Main Street	Giddings	0030.760
765818K	Harvey Street	Giddings	0031.030
742052R	Avenue 9 East	Gila	0742.820
742069U	Williams Street	Gila	0769.670
742075X	Avenue 40 East	Gila	0780.888
741082E	Martin Avenue	Gila	0855.780
741342V	North Ralston Road	Gila	0893.380
741345R	Porter Road	Gila	0900.250
741346X	North White And Parker Road	Gila	0901.490
741347E	Hartman Road	Gila	0903.910
922399X	West Cochie Canyon Trail	Gila	0961.660
741088V	West Tangerine Road	Gila	0965.690
741092K	Private	Gila	0967.440
741093S	Private	Gila	0968.660

DOT#	Street	Subdivision	Milepost
741098B	West Cortaro Farms Road	Gila	0972.028
741100A	West Massingale Road	Gila	0973.380
741102N	West Joiner Road	Gila	0975.615
755621G	Chimney Rock Road	Glidden	0014.731
755622N	Hillcroft Avenue	Glidden	0015.441
755623V	Haviland Street	Glidden	0015.730
755624C	Fondren Road	Glidden	0016.380
924006U	Stafford Northbound Frontage	Glidden	0019.570
924007B	Stafford Southbound Frontage	Glidden	0019.594
924008H	Fm 1092 Northbound Frontage Road	Glidden	0020.088
924009P	Fm 1092 Southbound Frtg Road	Glidden	0020.136
412514U	Promenade Boulevard	Glidden	0020.485
743695P	Kirkwood Road	Glidden	0021.321
922512N	Tx 6 Northbound Frontage Road	Glidden	0025.490
922513V	Tx 6 Southbound Frontage Road	Glidden	0025.538
743719B	Second Street	Glidden	0032.637
743720V	Fourth Street	Glidden	0032.740
743722J	Sixth Street	Glidden	0032.850
743723R	Eighth Street	Glidden	0032.945
743724X	Tenth Street	Glidden	0033.050
743725E	Douglas Street	Glidden	0033.200
743726L	Collins Road	Glidden	0033.370
763908C	Middle Street	Glidden	0119.317
763909J	Market Street	Glidden	0119.470
763910D	Penn Avenue	Glidden	0119.560
763911K	Tx 95	Glidden	0119.740
921019K	Private	Glidden	0119.960
742802Y	South Avenue F	Glidden	0131.100
742800K	South Avenue E	Glidden	0131.269
742799T	South Avenue D	Glidden	0131.350
961530S	Davenport Extension	Greenville	0612.890
717839Y	Brock Rd	Grenville	0612.270
717840T	Lawrenceville Street	Grenville	0612.502
288039B	Polk Street	Houston East Belt	0009.720
288046L	Leeland Street	Houston East Belt	0009.880
288048A	Jefferson Street	Houston East Belt	0009.990

DOT#	Street	Subdivision	Milepost
288050B	Lawndale Street	Houston East Belt	0010.210
288051H	Telephone Road	Houston East Belt	0010.380
762720W	Pinchback Road	Houston	0283.100
762721D	South Major Drive/Tx 364	Houston	0283.940
762956N	Wooten Road	Houston	0284.550
762722K	Todd Avenue	Houston	0285.094
762723S	Keith Road	Houston	0285.125
758525P	Willowbend Boulevard	Houston	0374.830
755618Y	Post Oak Northbound Frontage	Houston	0376.600
440652H	Post Oak Southbound Frontage	Houston	0376.620
817621F	North Pine Street	Kearney	0146.770
817619E	North Oak Street	Kearney	0146.590
816982G	Central Avenue	Kearney	0189.020
816984V	5th Avenue	Kearney	0189.380
762719C	Langham Road	Lafayette	0282.455
762057E	South 1200 West	Lakeside	0779.920
810600N	Southwest Drive	Laramie	0511.013
432560A	South Brazos Street	Laredo	0260.580
432566R	Pendleton Avenue	Laredo	0260.750
432567X	Cumberland Road	Laredo	0261.190
432568E	Drake Avenue	Laredo	0261.250
432572U	Harriman Place	Laredo	0261.560
432573B	Zarzamora Street	Laredo	0261.698
362844K	Roycefield Road	Lehigh Line	0039.620
362843D	Valley Road	Lehigh Line	0039.950
362842W	Auten Road	Lehigh Line	0040.650
362840H	Beckmans Lane	Lehigh Line	0041.280
362831J	Lehigh Road	Lehigh Line	0045.780
415683S	Camino Road/Tx 21	Lockhart	0049.890
415680W	I 35 Frontage Road North	Lockhart	0051.190
415678V	I 35 Frontage Road South	Lockhart	0051.310
415677N	East Hopkins Street/Tx 80	Lockhart	0051.560
741390K	Dragoon Road	Lordsburg	1053.890
741397H	Maley Street	Lordsburg	1074.750
741398P	Stewart Street	Lordsburg	1074.850
741399W	Pattie Road	Lordsburg	1076.040

DOT#	Street	Subdivision	Milepost
741403J	Central Avenue	Lordsburg	1098.460
741963R	Ruby Street	Lordsburg	1208.160
850998S	Greenwood Ave	Louisville	0272.500
850995W	Hale Ave	Louisville	0272.660
850994P	Virginia Av	Louisville	0272.760
850993H	Dumesnil St	Louisville	0272.850
850992B	Woodland Ave	Louisville	0273.040
850989T	Catalpa St	Louisville	0273.200
850984J	Wilson Avenue	Louisville	0273.400
850987E	28th St	Louisville	0273.500
850983C	25th St	Louisville	0273.600
731819W	Shelton Road	Memphis East	0347.030
731850H	Vine St	Memphis East	0363.230
732176G	Oak Court	Memphis West	0543.650
732175A	Goodlett St	Memphis West	0544.250
732186M	S Cooper St	Memphis West	0547.940
732189H	Kyle St	Memphis West	0548.670
732190C	Rozelle St	Memphis West	0548.750
732192R	Southern Ave	Memphis West	0549.030
794636C	Horaney Street	Mineola	0090.510
921043L	Fm 0548	Mineola	0192.600
794802S	Chestnut Street Fm 0548	Mineola	0193.620
794803Y	S Center Street	Mineola	0193.920
794804F	Elm Street	Mineola	0193.980
794805M	Fm 0740 S Bois D'arc St	Mineola	0194.050
794821W	Municipal Service Center Road	Mineola	0201.340
794822D	Florence Street	Mineola	0201.810
794823K	Galloway Avenue	Mineola	0202.100
794825Y	Ebrite Street	Mineola	0202.270
794827M	Gross Street	Mineola	0202.910
794832J	Sam Houston Road	Mineola	0205.730
794833R	North Prairie Creek Road	Mineola	0206.042
795418Y	Loop 12 North Frontage	Mineola	0207.068
794844D	Jim Miller Road	Mineola	0208.093
725711Y	Farnham Place	New Orleans	0001.920
725712F	West Oakridge Park	New Orleans	0001.990

DOT#	Street	Subdivision	Milepost
725713M	Matairie Road	New Orleans	0002.280
725714U	Carrollton Road	New Orleans	0002.460
764284S	Lone Star Boulevard	Rockport	0000.240
764281W	Private	Rockport	0000.400
764283K	Gugert Street	Rockport	0000.520
764282D	Mission Road	Rockport	0000.780
742933C	Loop 536/Roosevelt Avenue	Rockport	0001.120
750565K	Farron Street	Roseville	0110.170
750566S	Rocklin Road	Roseville	0110.560
750569M	Midas Avenue	Roseville	0110.900
750568F	Midas Avenue	Roseville	0110.930
753151U	Grass Valley Street	Roseville	0141.910
796340K	North Carver Street	Toyah	0552.440
448430B	Lamesa Road	Toyah	0552.730
796338J	Terrell Street	Toyah	0552.950
796337C	South Main Street	Toyah	0553.370
796335N	South Marienfield Street	Toyah	0553.710
796334G	South G Street	Toyah	0554.150
796332T	South K Street	Toyah	0554.400
796331L	Sh0058 / South Garfield Street	Toyah	0554.740
796330E	Midkiff Road	Toyah	0555.840
796329K	Warehouse Street	Toyah	0556.380
796328D	Eisenhower Street	Toyah	0557.290
796304P	Reed Avenue	Toyah	0570.710
796293E	Meadow Avenue	Toyah	0571.553
796249S	South Dixie Boulevard	Toyah	0572.720
796248K	Muskingum Avenue	Toyah	0573.030
796247D	Hancock Avenue	Toyah	0573.170
796246W	Texas Avenue	Toyah	0573.320
796243B	South Crane Avenue	Toyah	0573.760
796242U	Kelly Avenue	Toyah	0574.420
917061C	Wellington Road	Washington	0000.160
904632G	Wellington Road	Washington	0001.580
714355A	Godwin Drive	Washington	0001.850
714606S	Godwin Dr	Washington	0034.590
714680W	Spencer St	Washington	0067.240

DOT#	Street	Subdivision	Milepost
714681D	Stevens St	Washington	0067.490
714682K	Chandler St	Washington	0067.580
714764S	Concord St	Washington	0111.580
714765Y	Dale Ave	Washington	0111.760
714771C	Shamrock Rd	Washington	0113.290
468008A	Norfolk Avenue	Winston-Salem	0000.110
468010B	Campbell Avenue	Winston-Salem	0000.270
747174M	Whittier Avenue	Yuma	0544.500
747218K	Beaumont Avenue	Yuma	0545.380