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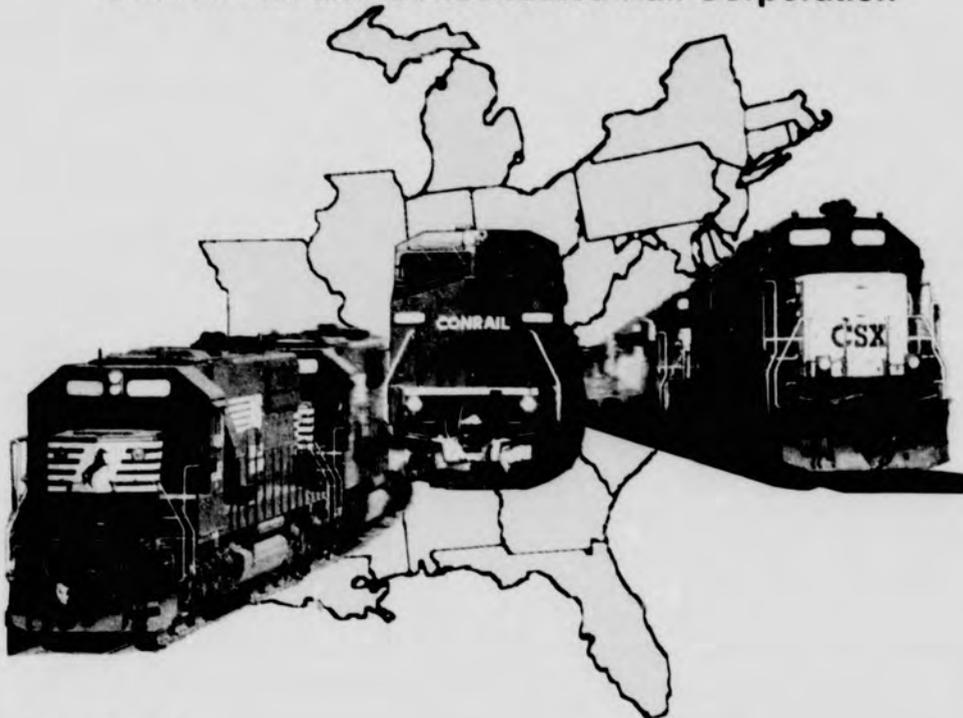
# DRAFT ENVIRONMENTAL IMPACT STATEMENT

Finance Docket No. 33388

## "PROPOSED CONRAIL ACQUISITION"

**CSX Corporation and CSX Transportation, Inc.  
Norfolk Southern Corporation and  
Norfolk Southern Railway Company**

Control and Operating Leases/Agreements  
**Conrail Inc. and Consolidated Rail Corporation**



### Volume 4

Chapter 6: Agency Coordination and Public Outreach

Chapter 7: SEA's Preliminary Recommended Environmental Mitigation

Chapter 8: List of Preparers

References

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<b>NPL</b>	National Priorities List
<b>NPS</b>	National Park Service
<b>NRCS</b>	Natural Resources Conservation Service
<b>NRHP</b>	National Register of Historic Places
<b>NS</b>	Norfolk Southern Railway Company
<b>NWI</b>	National Wetlands Inventory
<b>O<sub>3</sub></b>	Ozone
<b>OSHA</b>	Occupational Safety and Health Administration
<b>OTR</b>	Ozone Transport Region
<b>Pb</b>	Lead
<b>PDEA</b>	Preliminary Draft Environmental Assessment
<b>PM<sub>10</sub></b>	Particulate Matter (under 10 microns in diameter)
<b>PSD</b>	Prevention of Significant Deterioration
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>RCRIS</b>	Resource Conservation and Recovery Information System
<b>ROW</b>	Right-of-Way
<b>SEA</b>	Section of Environmental Analysis
<b>SEPTA</b>	Southeast Pennsylvania Transit Authority
<b>SCS</b>	Soil Conservation Service (currently named Natural Resources Conservation Service, Division of United States Department of Agriculture)
<b>SEL</b>	Source sound exposure level at 100 feet, dBA
<b>SHPO</b>	State Historic Preservation Officer
<b>SIP</b>	State Implementation Plan (for air quality)
<b>SO<sub>2</sub></b>	Sulfur dioxide
<b>SO<sub>x</sub></b>	Sulfur oxides
<b>SPL</b>	State Priority List
<b>STATSGO</b>	State Soil Geographic Database

<b>STB</b>	Surface Transportation Board
<b>SWLF</b>	State Inventory of Solid Waste Facilities
<b>TRAA</b>	Terminal Railroad Association of St. Louis
<b>TSD</b>	Treatment, Storage, or Disposal Sites
<b>TSP</b>	Total Suspended Particulates (particulate matter)
<b>UP/SP</b>	Union Pacific and Southern Pacific Railroad
<b>USC</b>	United States Code
<b>USDA</b>	United States Department of Agriculture
<b>USFWS</b>	United States Fish and Wildlife Service
<b>USGS</b>	United States Geological Survey
<b>VISTA</b>	VISTA Environmental Information, Inc.
<b>VOC</b>	Volatile organic compounds
<b>VRE</b>	Virginia Rail Express

## LIST OF ACRONYMS AND ABBREVIATIONS

<b>ACHP</b>	Advisory Council on Historic Preservation
<b>ADT</b>	Average Daily Traffic
<b>AQCR(s)</b>	Air Quality Control Region(s)
<b>BIA</b>	Bureau of Indian Affairs
<b>BMPs</b>	Best Management Practices
<b>BN</b>	Burlington Northern & Santa Fe Railroad Company
<b>CAAA</b>	Clean Air Act and Amendments
<b>CERCLIS</b>	Comprehensive Environmental Response, Compensation, and Liability Information System
<b>CFR</b>	Code of Federal Regulations
<b>CN</b>	Canadian National
<b>CO</b>	Carbon Monoxide
<b>COE</b>	United States Army Corps of Engineers
<b>CSX</b>	CSX Transportation, Inc.
<b>CTC</b>	Centralized Traffic Control
<b>CWA</b>	Clean Water Act
<b>CZMA</b>	Coastal Zone Management Act
<b>db</b>	Decibel
<b>dBA</b>	Decibels (of sound) A range
<b>DOT</b>	United States Department of Transportation
<b>EA</b>	Environmental Assessment
<b>EPA</b>	Environmental Protection Agency
<b>ERNS</b>	Emergency Response Notification System
<b>FEMA</b>	Federal Emergency Management Agency
<b>FHWA</b>	Federal Highway Administration
<b>FIRM</b>	Flood Insurance Rate Maps

<b>FMEA</b>	Failure Mode and Effects Analysis
<b>FRA</b>	Federal Railroad Administration
<b>HC</b>	Hydrocarbons (in air)
<b>IC</b>	Illinois Central
<b>ICC</b>	Interstate Commerce Commission (former licensing agency for the proposed Acquisition; Acquisition approval authority now with the Surface Transportation Board)
<b>ISTEA</b>	Intermodal Surface Transportation Efficiency Act
<b>L<sub>dn</sub></b>	Day-night equivalent sound level
<b>L<sub>max</sub></b>	Maximum sound level during train passby, dBA
<b>LIRR</b>	Long Island Rail Road
<b>LOS</b>	Level of Service
<b>LUST</b>	Leaking Underground Storage Tank
<b>MARC</b>	Maryland Rail Commuter
<b>MNR</b>	Metro North Railroad
<b>MOU</b>	Memorandum of Understanding
<b>MP</b>	Mile Post
<b>MPH</b>	Miles per Hour
<b>NAAQS</b>	National Ambient Air Quality Standards
<b>NEC</b>	Northeast Corridor
<b>NEPA</b>	National Environmental Policy Act of 1969
<b>NHPA</b>	National Historic Preservation Act of 1966
<b>NJT</b>	New Jersey Transit
<b>NO<sub>2</sub></b>	Nitrogen dioxide
<b>NO<sub>x</sub></b>	Nitrogen oxides
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NMFS</b>	National Marine Fisheries Service
<b>NPDES</b>	National Pollution Discharge Elimination System

- wetland** As defined by 40 CFR Part 230.3, wetlands are "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include swamps, marshes, bogs, and similar areas.
- wye track** A principal track and two connecting tracks arranged like the letter "Y" on which locomotives, cars and trains may be turned.
- yard truck** Any truck that has delivery into a rail yard.

<b>rail spur</b>	A track that diverges from a main line, also known as a spur track or rail siding, which typically serves one or more industries.
<b>rail yard</b>	A location where rail cars are switched and stored.
<b>railbanking</b>	A set-aside of abandoned rail corridor for recreational and/or transportation uses, including reuse for rail.
<b>receptor/receiver</b>	A land use or facility where sensitivity to noise or vibration is considered.
<b>right-of-way</b>	The strip of land for which an entity (e.g., a railroad) has a property right to build, operate, and maintain a linear structure, such as a road, railroad or pipeline.
<b>riparian</b>	Relating to, living, or located on, or having access to, the bank of a natural water course, sometimes also a lake or tidewater.
<b>riprap</b>	A loose pile or layer of broken stones erected in water or on soft ground as a guard against erosion.
<b>riverine wetland</b>	All wetlands and deepwater habitats contained within a channel, either naturally or artificially created.
<b>route miles</b>	Distance calculated along a railroad's main and branch lines.
<b>ruderal</b>	An introduced plant community dominated by weed species, typically adapted to disturbed areas.
<b>scrub-shrub</b>	Areas dominated by woody vegetation less than 6 meters (20 feet) tall, which includes shrubs and young trees.
<b>set out</b>	To remove one or more cars from a train at an intermediate (non-yard) location such as a siding, interchange track, spur track, or other track designated for the storage of cars.
<b>Section 106</b>	Refers to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended through 1992 (16 U.S.C. 470). Section 106 requires a Federal agency head performing a Federal undertaking to take into account the undertaking's effects on historic properties.

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<b>sound</b>	A physical disturbance in a medium (e.g., air) that is capable of being detected by the human ear.
<b>Sound Exposure Level (SEL)</b>	A quantitative measure of the noise exposure produced by a given noise event. The sound exposure level (SEL) is equivalent in magnitude to a reference signal with a duration of one second. The SEL accounts for both the magnitude and duration of the noise event and can be used to calculate the contribution of specific events to the overall noise environment. The SEL is representative of the total sound energy produced by the event at an observation point; it indicates the constant sound level with one second duration that corresponds to the same total sound energy as the given event.
<b>take or taking</b>	Refers to a removal of property, an acquisition of right-of-way, or a loss and/or degradation of species' habitat.
<b>threatened</b>	A species that is likely to become an endangered species within the foreseeable future throughout all or part of its range, and is protected by state and/or federal law.
<b>trackage rights</b>	The right or combination of rights of one railroad to operate over the designated trackage of another railroad including, in some cases, the right to operate trains over the designated trackage; the right to interchange with all carriers at all junctions; the right to build connections or additional tracks in order to access other shippers or carriers.
<b>turnout</b>	A track arrangement consisting of a switch and frog with connecting and operating parts, extending from the point of the switch to the frog, which enables engines and cars to pass from one track to another.
<b>unit train</b>	A train consisting of cars carrying a single commodity, e.g., a coal train (see also bulk train).
<b>water resources</b>	An all inclusive term that refers to many types of permanent and seasonally wet/dry surface water features including springs, creeks, streams, rivers, ponds, lakes, wetlands, canals, harbors, bays, sloughs, mudflats, and sewage-treatment and industrial waste ponds.

<b>key routes</b>	As defined by the Association of American Railroads (AAR), a key route is a track that carries an annual volume of 10,000 car loads or intermodal tank loads of any hazardous material. AAR has developed voluntary industry key route maintenance and equipment guidelines designed to address safety concerns in the rail transport of hazardous materials. For analysis purposes, SEA has used the term "major key route" to identify routes where the volume of hazardous materials carried on a route would double and exceed a volume of 20,000 carloads as a result of the proposed Conrail Acquisition.
<b>key train</b>	The Association of American Railroads (AAR) defines a key train as any train handling five or more carloads of poison inhalation hazard (PIH) materials or a combination of 20 or more carloads containing hazardous materials. Under AAR voluntary industry guidelines, railroads impose operating restrictions on key trains to ensure safe rail transport of these materials. These restrictions include maximum speeds, and meeting and passing procedures.
<b><math>L_{dn}</math></b>	Nighttime noise level ( $L_n$ ) adjusted to account for the perception that a noise level at night is more bothersome than the same noise level would be during the day.
<b>Level of Service (LOS)</b>	Level of Service (rating A through F). A measure of the functionality of a highway or intersection that factors in vehicle delay, intersection capacity and effects to the street/highway network.
<b>lift</b>	A lift is defined as an intermodal trailer or container lifted onto or off of a rail car. For calculations, lifts are used to determine the number of trucks using intermodal facilities.
<b>locomotive, road</b>	One or more locomotives (or engines) designed to move trains between yards or other designated points.
<b>locomotive, switching</b>	A locomotive (or engine) used to switch cars in a yard, between industries, or in other areas where cars are sorted, spotted (placed at a shipper's facility), pulled (removed from a shipper's facility), and moved within a local area.

<b>main line</b>	The principle line or lines of a railway.
<b>merchandise train</b>	A train consisting of single and/or multiple car shipments of various commodities.
<b>mitigation</b>	Actions to prevent or lessen negative effects.
<b>mobile source</b>	A term used in reference to air quality meaning a source of air emissions that are not in a fixed location, such as a locomotive or automobile.
<b>National Register</b>	A listing of historic places maintained by the Secretary of the Interior.
<b>National Wetlands Inventory</b>	An inventory of wetland types in the United States compiled by the U.S. Fish and Wildlife Service.
<b>noise</b>	Any undesired sound or unwanted sound.
<b>nonattainment</b>	An area that does not meet standards specified under the Clean Air Act.
<b>Non-point source discharge</b>	Pollution not associated with a specific, fixed outfall location (e.g., sewer pipe), such as runoff from a construction site.
<b>palustrine wetland</b>	Non-tidal wetland dominated by trees, shrubs or persistent emergent vegetation. Includes wetlands traditionally classified as marshes, swamps, or bogs.
<b>passby</b>	The passing of a train past a specific reference point.
<b>pick up</b>	To add one or more cars to a train from an intermediate (non-yard) track designated for the storage of cars.
<b>precursor</b>	A term used in reference to air quality, meaning an initial ingredient contributing to a subsequent air quality pollutant.
<b>prime farmland</b>	Land defined by the Natural Resource Conservation Service (NRCS) as having the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops.
<b>point source</b>	A distinct stationary source of air or water pollution such as a factory or sewer pipes.

<b>dray</b>	A local move of a trailer, truck, or container.
<b>emergent species</b>	An aquatic plant with vegetative growth mostly above the water.
<b>endangered species</b>	A species of plant or animal that is in danger of extinction throughout all or a significant portion of its range and is protected by state and/or federal laws.
<b>failure mode and effects analysis (FMEA)</b>	This analysis is a method of analyzing the causes and consequences of potential spills of stored and transported hazardous materials. This procedure helps reduce the risk of such spills by eliminating known causes.
<b>fill</b>	The term used by the United States Army Corps of Engineers that refers to the placement of suitable materials (e.g., soils, aggregates, concrete structures, etc.) within water resources under Corps jurisdiction.
<b>flat yard</b>	A system of relatively level tracks within defined limits for making up trains, storing cars, and other purposes which requires a locomotive to move cars (switch cars) from one track to another.
<b>Flood Insurance Rate Maps</b>	Maps available from the Federal Emergency Management Agency that delineate the land surface area of 100-year and 500-year flooding events.
<b>floodplain</b>	The lowlands adjoining inland and coastal waters and relatively flat areas and flood prone areas of offshore islands, including, at a minimum, that area inundated by a one percent (also known as a 100-year or Zone A floodplain) or greater chance of flood in any given year.
<b>frog</b>	A track structure used where two running rails intersect that permits wheels and wheel flanges on either rail to cross the other rail.
<b>habitat</b>	The place(s) where plant or animal species generally occur(s) including specific vegetation types, geologic features, and hydrologic features. The continued survival of that species depends upon the intrinsic resources of the habitat. Wildlife habitats are often further defined as places where species derive sustenance (foraging habitat) and reproduce (breeding habitat).

<b>haulage right</b>	The limited right of one railroad to operate trains over the designated lines of another railroad.
<b>hazardous materials</b>	Any material that poses a threat to human health and/or the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive.
<b>highway/rail at-grade crossing</b>	The location where a local street or highway crosses railroad tracks at the same level or elevation.
<b>historic property</b>	Any prehistoric or historic district, site, building, structure, or object that warrants consideration for inclusion in the National Register of Historic Places (NRHP). The term "eligible for inclusion in the NRHP" includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet NRHP listing criteria.
<b>hump yard</b>	A railroad classification yard in which the classification of cars is accomplished by pushing them over a summit, known as a "hump," beyond which they run by gravity.
<b>interlocking</b>	An arrangement of switch, lock, and signal appliances interconnected so that their movements succeed each other in a predetermined order, enabling a moving train to switch onto adjacent rails. It may be operated manually or automatically.
<b>intermodal facility</b>	A site or hub consisting of tracks, lifting equipment, paved areas, and a control point for the transfer (receiving, loading, unloading, and dispatching) of intermodal trailers and containers between rail and highway or rail and marine modes of transportation.
<b>intermodal train</b>	A train consisting or partially consisting of highway trailers and containers or marine containers being transported for the rail portion of a multimodal movement on a time-sensitive schedule; also referred to as a piggyback, TOFC (Trailer on Flat Car), COFC (Container on Flat Car), and double stacks (for containers only).

## GLOSSARY

<b>at-grade roadway crossing</b>	The location where a local street or highway crosses railroad tracks at the same level or elevation.
<b>attainment area</b>	An area that meets National Ambient Air Quality Standards (NAAQS) specified under the Clean Air Act.
<b>A-weighted Sound Level (dBA)</b>	The most commonly used measure of noise, expressed in "A-weighted" decibels (dBA), is a single-number measure of sound severity that accounts for the various frequency components in a way that corresponds to human hearing.
<b>ballast</b>	Top surface of rail bed, usually composed of aggregate (i.e., small rocks and gravel).
<b>Best Management Practices (BMPs)</b>	Techniques recognized as very effective in providing environmental protection.
<b>Board</b>	Surface Transportation Board, the licensing agency for the proposed Conrail Acquisition.
<b>borrow material</b>	Earthen material used to fill depressions to create a level right-of-way.
<b>branch line</b>	A secondary line of railroad usually handling light volumes of traffic.
<b>bulk train</b>	Also known as a unit train. A complete train consisting of a single non-breakable commodity (such as coal, grain, semi-finished steel, sulfur, potash, or orange juice) with a single point of origin and destination.
<b>consist</b>	The make-up of a train, usually referring to the number of cars.
<b>construction footprint</b>	The area at a construction site subject to both permanent and temporary disturbances by equipment and personnel.
<b>Class I Railroad</b>	Railroads that exceed annual gross revenues of \$250 million, in 1991 dollars. The amount is indexed annually to reflect inflation. For 1996, the annual gross revenue was \$255 million.

<b>Criteria of Effect</b>	The Advisory Council on Historic Preservation's (ACHP) Criteria of Effect and Adverse Effect (35 CFR Part 800.9) provide the basis for determining potential effects on historic properties.
<b>criteria pollutant</b>	Any of six air emissions (lead, carbon dioxide, sulfur dioxide, nitrogen dioxide, ozone and particulate mater) regulated under the Clean Air Act, for which areas must meet national air quality standards.
<b>cultural resource</b>	Any prehistoric or historic district, site, building, structure, or object that warrants consideration for inclusion in the National Register of Historic Places (NRHP). For the purposes of this document, the term applies to any resource more than 50 years of age for which SEA gathered information to evaluate its significance.
<b>Day-Night Sound (<math>L_{dn}</math>)</b>	One of the most widely accepted measures of cumulative noise exposure in residential areas. The Day-Night Sound Level ( $L_{dn}$ ) is the A-weighted sound level, averaged over a 24-hour period, but with levels observed during the nighttime hours between 10 p.m. and 7 a.m., increased by 10 dBA to account for increased sensitivity at night.
<b>dBA</b>	Adjusted decibel level. A sound measurement that adjusts noise by filtering out certain frequencies to make it analogous to that perceived by the human ear. It applies what is known as an "A-weighting" scale to acoustical measurements.
<b>decibel (dB)</b>	A logarithmic scale that compresses the range of sound pressures audible to the human ear over a range from 0 to 140, where 0 decibels represents sound pressure corresponding to the threshold of human hearing, and 140 decibels corresponds to a sound pressure at which pain occurs. Sound pressure levels that people hear are measured in decibels, much like distances are measured in feet or yards.
<b>deciduous</b>	Any plant whose leaves are shed or fall off during certain seasons; usually used in reference to tree types.

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**SURFACE TRANSPORTATION BOARD  
Finance Docket No. 33388**

**CSX Corporation and CSX Transportation, Inc.  
Norfolk Southern Corporation and Norfolk Southern Railway Company  
--Control and Operating Leases/Agreements--  
Conrail Inc. and Consolidated Rail Corporation**

**GUIDE TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT**

This Draft Environmental Impact Statement (Draft EIS) evaluates the potential environmental effects that could result from the proposed Acquisition of Conrail Inc. and Consolidated Rail Corporation (Conrail) by CSX Corporation and CSX Transportation, Inc. (CSX) and Norfolk Southern Corporation and Norfolk Southern Railway Company (NS). The Surface Transportation Board's Section of Environmental Analysis (SEA) has prepared this document in accordance with the requirements of National Environmental Policy Act (NEPA), as amended (42 U.S.C. 4321), Council on Environmental Quality (CEQ) implementing NEPA, the Board's environmental rules (49 CFR Part 1105) and other applicable environmental statutes and regulations.

The Draft Environmental Impact Statement includes the following:

An **Executive Summary** which provides an overview and summary of the Draft EIS including and proposed mitigation.

**Volume 1: Chapters 1 through 4**

- Chapter 1 discusses the purpose and need for the project and sets forth the jurisdiction of the Surface Transportation Board (Board) and reviewing agencies. It also presents the parties to the proposed Acquisition, SEA's environmental review process and the agency coordination and public participation process.
- Chapter 2 describes the three railroads' existing network, the proposed Acquisition, alternatives considered, and related actions.
- Chapter 3 contains a description of the analysis methods and potential mitigation strategies.
- Chapter 4 presents system-wide and regional settings, potential effects of the proposed action, and measures to mitigate adverse effects. It also summarizes the No-Action alternative and discusses cumulative effects; the relationship between short-term uses of the environment and enhancement of long-term productivity; and irreversible and irretrievable commitments of resources.

**Volume 2 (A through C): Safety Integration Plans**

These volumes (2A through 2C) consist of the Applicants' Safety Integration Plans, Board Decision requiring these plans, and U.S. Department of Transportation comments on rail safety.

**Volume 3: State Setting, Impacts, and Proposed Mitigation**

- These two volumes (3A and 3B) consist of a series of sections which discuss the setting, impacts, and proposed mitigation by state. The potential impacts of individual segments, intermodal facilities, rail yards, new constructions, abandonments, and other types of action are part of this discussion.
- Volume 3A contains the states Alabama through Missouri.
- Volume 3B contains the states New Jersey through Washington, D.C.

**Volume 4: Chapter 6 through 8 and References**

- Chapter 6 describes SEA's agency coordination and public outreach efforts including the scoping process and document distribution.
- Chapter 7 presents SEA's preliminary mitigation recommendations to the Board.
- Chapter 8 contains a list of document preparers.

**Volume 5: Appendices**

- These three volumes (5A through 5C) contain the methods, extensive tables, and other pertinent data by discipline as well as public outreach and agency coordination documents and verified statements.
- Volume 5A contains the technical appendices.
- Volume 5B contains the public and agency correspondence, public outreach materials, and responses from other railroads.
- Volume 5C contains verified statements, relevant Board Decisions, Federal regulations, site visit summaries, and other pertinent information.

**Volume 6: Proposed Abandonments**

This volume provides detailed analysis and mitigation of the potential environmental impacts associated with the proposed abandonment of line segments and related salvage activities.

To assist the reader in the review of this document, a Glossary and List of Acronyms are included in front of each volume.

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## CHAPTER 6

### Agency Coordination and Public Outreach

This chapter describes the process that the Section on Environmental Analysis (SEA) implemented to determine the scope of this Environmental Impact Statement (EIS), as well as its ongoing agency coordination and public outreach.

SEA implemented an extensive agency coordination and public outreach effort to ensure that it informed potentially affected organizations and individuals about the proposed Conrail Acquisition and the potential environmental impacts. This effort also ensured that potentially affected parties had ample opportunity to comment on the scope of the EIS, potential environmental impacts of the proposed Acquisition and SEA's preliminary recommended mitigation for potentially significant impacts.

#### 6.1 SCOPING PROCESS

According to the National Environmental Policy Act (NEPA), agencies undertaking major Federal actions must consult with other government agencies and the public before preparing environmental documents. As discussed in Chapter 1, Surface Transportation Board (Board) approval of the proposed Conrail Acquisition is considered a major Federal action. The lead Federal agency in this case. Through early consultation, the lead agency can notify agencies and the public of the proposed action at the beginning of the environmental impact review process. Coordination is important because it provides an early opportunity for agencies with review and permitting responsibilities, as well as the public, to comment on the range and depth of the issues to be studied. The range of issues examined in the EIS is called the scope of the EIS. "Scoping" is the process of requesting and reviewing comments on these issues. During scoping, the lead agency for an EIS develops a formal draft scope for the EIS and provides the opportunity for agencies and the public to comment on it. The lead agency considers all comments received during the scoping process, and modifies the proposed scope as appropriate.

SEA developed a draft scope of the EIS of the proposed Conrail Acquisition which was mailed to 1,964 Federal, state, local agencies, and other interested parties on July 3, 1997. The draft scope of the EIS was subsequently published in the Federal Register on July 7, 1997, as part of

the Notice of Intent to prepare an EIS and EIS scoping notice. Comments on the draft scope were due by August 6, 1997. Additionally, press releases detailing the scope were distributed to 198 newspapers in metropolitan areas potentially affected by the proposed Conrail Acquisition. SEA also published legal notices in more than 800 newspapers with the highest circulation for each of the potentially affected counties. SEA received more than 170 comments concerning the draft scope of the EIS including:

- 21 comments from Federal agencies including the U.S. Departments of Agriculture, Commerce, Housing and Urban Development, Interior, and Transportation; the U.S. Army Corps of Engineers; the U.S. Coast Guard; and the Environmental Protection Agency.
- 48 comments from state agencies in 24 states (AL, DE, FL, GA, IL, IN, KY, LA, MD, MA, MI, MS, MO, NC, NJ, NY, OH, PA, RI, SC, TN, VT, VA, and WV).
- 78 comments were from local, county, and regional agencies in 18 states and Washington, D.C. (AL, DE, FL, GA, IL, IN, KY, LA, MD, MA, MI, NC, NJ, NY, OH, PA, TN, and VA).
- Nine comments from citizens in DE, GA, and OH. Five businesses, including Interstate Commodities, Inc., Johnson Environmental Consulting Group, Inc., Newark (DE) Center for Creative Learning, Newark (DE) Day Nursery, and Port Richmond Community Council, Inc., provided comment, as did a rail carrier, National Railroad Passenger Corporation (Amtrak).
- Eight comments from other interested parties, including the League of Women Voters of New Castle County, DE; the American Public Transit Association; The Waterfront Historic Area League, New Bedford, MA; Indianapolis Power & Light Company, IN; Downtown Newark, DE; University of Delaware, DE; Women Like Use, D.C., and Rutgers, The State University of New Jersey School of Law on behalf of the Tri-State Transportation Campaign, NY.

The comments covered a broad range of topics, including air quality, water resources, noise, at-grade highway safety, rail accidents, emergency vehicle response times, hazardous materials transportation and spills, environmental justice, and current and future commuter rail service.

SEA reviewed and considered all comments received in its preparation of the final scope of the EIS. The final scope reflects changes made because of comments on the draft scope of the EIS. SEA made other changes in the final scope of the EIS for clarification.

Specifically, the Safety Section of the final scope of the EIS provides that SEA will consider grade crossing safety generally for at-grade highway crossings with average daily traffic levels of 5,000 or more vehicles. In applying this threshold for the review of at-grade crossings in past environmental documents, SEA found it to be a conservative baseline.

SEA received several comments concerning hazardous waste. In response, SEA added a section to the final scope of the EIS to indicate that the Draft EIS will assess the locations and types of hazardous waste sites and spills on the rights-of-way of proposed construction projects and rail line abandonments. SEA notes, however, that other Federal and state agencies have primary jurisdiction for investigation, clean-up, and remediation of hazardous waste sites.

SEA received approximately 20 comments related to potential impacts on commuter rail service. In response SEA expanded the Transportation Systems Section of the final scope to include an analysis of potential passenger diversions, and reasonably foreseeable commuter rail inception or expansion plans (that is, where transit agencies have planned, approved, and funded capital improvements). The final scope also addresses comments requesting that SEA discuss the potential impacts of increased train traffic on movable (draw) bridges over navigable channels.

SEA clarified the Energy Section in the final scope to address estimated system-wide changes in energy efficiency (fuel use) including the impact of truck-to-rail diversions. The Energy Section also addresses the overall estimated changes in energy efficiency resulting from rail-to-truck diversions subject to the Board's regulatory thresholds in 49 CFR 1105.7 (e)(4)(iv).

SEA expanded the Air Quality Section to include the calculation of net increases of emissions from the proposed transaction for counties where SEA projected increases in locomotive emissions to be one hundred tons or more per year. SEA modified the Noise Section, to reflect the actual data that are available to analyze noise impacts. SEA will develop estimates of receptors where they predict noise levels to rise to 65 decibels  $L_{dn}$  or greater as a result of rail traffic increases related to the proposed Acquisition.

SEA expanded the Environmental Justice Section in the final scope to include a report on the demographics within the vicinity of rail line segments meeting the Board's thresholds for environmental analysis. SEA has and is continuing to conduct an analysis of potential environmental impacts which could have a disproportionately high and adverse health effect on minority or low-income populations.

The portion of the final scope of the EIS involving Land Use/Socioeconomic Issues includes a consideration of socioeconomic impacts to the extent that they result directly from changes to the physical environment due to the proposed Acquisition. That approach is consistent with the U.S. Supreme Court decision in *Metropolitan Edison Co. V. People Against Nuclear Energy*, 460 U.S. 766 (1982). The labor protection afforded by the Board in considering the merits of the proposed transaction will cover those most directly and immediately affected by the proposed transaction, the employees of the consolidating carriers. Therefore, the EIS does not address these impacts. SEA expanded the Land Use/Socioeconomic Issues Section to specifically state that the EIS will address the potential environmental impacts of proposed rail line construction and abandonment activities on Native American reservations and sacred sites.

Several comments on the draft scope of the EIS suggested there be an analysis of the cumulative impacts of certain environmental effects related to the proposed transaction. This Draft EIS has addressed cumulative effects where such effects could have regional or system-wide impacts. Specific cumulative effects which SEA analyzed include air quality and energy. SEA analyzed cumulative effects for other projects or activities related to the proposed transaction where information was provided in a timely fashion to the Board describing those projects, their interrelationship to the proposed transaction, and the type and severity of the potential environmental impacts, and SEA determined that there was the likelihood of significant environmental impacts. Finally, as part of its Environmental Justice analysis, SEA has and is continuing to conduct an expanded public outreach effort to identify potential cumulative environmental impacts in minority or low-income communities where there is potential for significant environmental impacts.

SEA has prepared this Draft EIS in accordance with the final scope as published in the Federal Register on October 1, 1997 (Federal Register, Vol. 62, No. 190, p. 51,500).

## **6.2 ONGOING AGENCY AND PUBLIC COORDINATION**

SEA's ongoing agency and public coordination effort provides information about the proposed Conrail Acquisition and about the opportunity for any interested party to comment on the Draft EIS. After considering agency and public comments on the Draft EIS, SEA will issue a Final EIS. The Final EIS will address the comments on the Draft EIS and will include SEA's final recommendations on appropriate environmental mitigation. SEA will serve the Final EIS in April 1998, prior to the Board's voting conference, scheduled for April 14, 1998.

### **6.2.1 Agency Coordination Process**

In addition to the scoping activities, SEA set the following goals for agency coordination:

- Comply with pertinent Federal statutes and Executive Orders.
- Facilitate communication among agencies.
- Respond to technical comments and issues.
- Access data and information about the study area and any related projects.

SEA contacted several hundred Federal, state, and regional agencies when the railroads filed the Application for the proposed Conrail Acquisition. SEA prepared and distributed an agency consultation letter, along with a draft scope, advising the agencies that the railroads had filed the Application and that the Board intended to prepare an EIS. The agency consultation letter described the proposed Conrail Acquisition, SEA's role in the environmental review process, the environmental review and public comment process, and included a copy of the draft scope of the EIS. SEA also sent the consultation letter and draft scope to potentially affected counties and more than 150 incorporated cities and towns to inform them of rail traffic increases (if any) on

rail line segments or other types of actions meeting or exceeding Board thresholds. The agency consultation list and EIS scope distribution is included in the following Table 6-1.

**Table 6-1  
EIS Scope Distribution**

Entity Type	Number
Federal Agencies	136
Local Elected Officials - County/City Level	667
Local Government Agencies - County/City Level	580
Environmental Organization and Citizen's Group	6
Rail Unions	20
Railroads	11
Regional Groups and Agencies <sup>a</sup>	335
Special Interest Groups	16
State Agencies	157

<sup>a</sup> Have more than one jurisdiction (e.g. metropolitan planning organizations)

SEA contacted many agencies, either by letter or telephone, to collect data, coordinate agency issues, or provide information about the environmental review process. SEA also met with Federal and state agencies to discuss issues and concerns provided to SEA during the comment period on the draft Scope of the EIS. A table appears in Appendix M listing many of the agency coordination contacts SEA conducted during the development of the Draft EIS. The table presents highlights of the topics discussed. A copy of the agency consultation letter is included in Appendix O. Appendix M also displays correspondence received from agencies.

### 6.2.2 Applicants' Agency Coordination

Prior to the filing of the Notice of Intent to file a Joint Application in April 1997, CSX and NS each intended to separately and exclusively acquire Conrail. As part of their required agency coordination in preparation of an application to the Board, each railroad, through its environmental contractors contacted numerous Federal, state, and local agencies. During this early agency coordination, if the railroads modified their operating plans, their respective contractors sent some agencies additional notices. As a result, many agencies received similar conflicting requests for agency coordination regarding the acquisition of Conrail.

When CSX and NS filed the notice for a single and joint acquisition, SEA directed the Applicants to minimize further contacts with agencies. SEA intended this direction as a measure

to reduce confusion among agencies and focus agency consultation on the Federal environmental review process.

In June 1997, the Applicants distributed an Environmental Report and Operating Plans, prepared in accordance with Board requirements. Applicants provided SEA with copies of all communication reports and agency correspondence. To provide consistent distribution, SEA provided its agency mailing list to the Applicants for distributing the Environmental Report. The Applicants included text at the beginning of each of the three volumes of their Environmental Report advising recipients that SEA would be preparing an EIS and would be initiating the Federal scoping process. The Applicants subsequently distributed an Errata and Supplemental Environmental Report (correcting and adding to information in the original Environmental Report) using the same distribution list.

SEA reviewed the Environmental Report and all of the agency consultation materials and incorporated appropriate information into the Draft EIS analysis.

### **6.2.3 Public Outreach Process**

SEA implemented an extensive public outreach program, which included a variety of methods to inform the public of the EIS preparation process, and to encourage public participation throughout the environmental review process. Actions SEA took to encourage public awareness include:

- Distributing press releases.
- Publishing legal notices in major newspapers.
- Distributing a fact sheet, in both English and Spanish, describing the proposed Acquisition.
- Establishing a toll-free telephone hotline with messages recorded in both English and Spanish at (888) 869-1997.
- Creating an Internet Web site ([www.conrailmerger.com](http://www.conrailmerger.com)) containing information on the Acquisition.

More specifically, SEA distributed information about the proposed Conrail Acquisition and the intent to prepare an Environmental Impact Statement. SEA prepared a press release summarizing the information provided to agencies and distributed it to the media in 24 states and Washington, D.C. SEA arranged for legal notices to be placed in the newspapers with the highest circulation for each of the potentially affected counties. SEA also prepared and distributed a fact sheet describing the proposed Conrail Acquisition to more than 7,000 elected officials, agencies, and organizations for the cities and counties potentially affected by the proposed Conrail Acquisition (See Appendix O for these materials.) The Internet Web site received over 3,900 logged user sessions.

SEA has conducted expanded outreach to the following communities with potential Environmental Justice impacts (copies of the detailed public outreach plans can be found in Appendix K):

Chicago, IL  
Blue Island, IL  
Gary, IN  
Fort Wayne, IN  
Lafayette, IN  
Baltimore, MD  
Cheverly, MD (and surrounding area in Prince Georges County)  
Cleveland, OH  
Ashtabula, OH  
Youngstown, OH  
Toledo, OH  
Marion, OH  
West Newton, PA  
Harrisburg, PA  
Nashville, TN  
Washington, DC

#### **6.2.4 Summary of Comments Received**

As of November 1, 1997, SEA received 1,600 separate comments related to environmental concerns on the proposed Conrail Acquisition, the procedural schedule, the draft Scope of the EIS, and the Seven Connections. SEA established a comprehensive database to record and maintain all comments received in writing or via the telephone hotline and the Website. Most of the environmental concerns were provided to SEA by mail, but a small number of comments were submitted to SEA by telephone and via the Internet.

Elected officials and agencies in Federal, state, regional and local government; railroads; civic and advocacy organizations; businesses; and individuals submitted comments. A total of approximately 794 documents containing the approximately 1,600 environmental comments were submitted to SEA. (See Table 6-2.) The specific number of documents each group filed include:

- Federal Officials and Agencies (42).
- State Officials and Agencies (85).
- Regional and Local Officials and Agencies (148).
- Railroad (1).
- Organizations and other (16).
- Businesses (9).
- Individuals (493)

**Table 6-2**  
**Environmental Comments by State as of November 1, 1997<sup>a</sup>**

State	Comments
Alabama	3
Connecticut	3
Delaware	31
Florida	13
Georgia	11
Illinois	19
Indiana	22
Kentucky	5
Louisiana	3
Maryland	18
Massachusetts	6
Michigan	14
Mississippi	3
Missouri	4
New Jersey	11
New York	16
North Carolina	7
Ohio	531
Pennsylvania	17
Rhode Island	2
South Carolina	1
Tennessee	6
Vermont	1
Virginia	12
West Virginia	1
Washington, D.C.	7

<sup>a</sup> This table indicates the geographic scope of the comments, not the geographic origin of the comments. For instance, comments were assigned to more than one state such as the comments from the Ohio, Kentucky, Indiana (OKI) Regional Council of Governments. Further, comments were not assigned to any state if the comment was regional or national in its geographic scope. For instance, Federal agency comments were not assigned to states unless their comments were specific to a state.

## Environmental Comments

The comments addressed a range of issues related to the potential environmental impacts of the rail operations, the abandonment of rail line segments, and the construction of new rail line connections and rail facilities such as intermodal yards and rail yards associated with the proposed Conrail Acquisition. (See Table 6-3). The specific environmental issues included noise, air quality, emergency response, highway congestion, rail accidents, vehicle delay at grade crossings, pedestrian safety at grade crossings, transportation of hazardous commodities, and commuter operations. In some instances, a commentor raised more than one environmental issue.

**Table 6-3**  
**Number of Issues Raised in the Environmental Comments Received**

Environmental Impact Category	Topic	Number
Safety	Rail Accidents	126
	Grade Crossing/Pedestrians	121
	Grade Crossing/Vehicle	57
	Intercity Passenger Service <sup>a</sup>	26
	Commuter Operations <sup>a</sup>	62
	Hazardous Materials Transport	187
Transportation Systems	Emergency Response	250
	Rail Operations	27
	Commuter Operations <sup>a</sup>	(62)
	Intercity Passenger Service <sup>a</sup>	(26)
	Transportation: Other	3
	Traffic Congestion	76
Energy	Energy	7
Air Quality	Air Quality	177
Noise	Noise	208
Cultural Resources	Cultural and Historic Resources	36
Hazardous Material	Hazardous Waste Site	7

Environmental Impact Category	Topic	Number
Natural Resources	Threatened & Endangered Species	9
	Wildlife Habitat	2
	Wetlands	10
	Water Resources	30
	Natural Resources: General	6
Land Use/Socioeconomics	Land Use	62
	Planning	18
	Prime Farm Land	25
	Coastal Zone Management	26
Environmental Justice	Environmental Justice	11
Cumulative Effects	Cumulative Effects	3
Others	General Environmental	17
	Maintenance	12
<b>Total Comments on Topics<sup>a</sup></b>		<b>1,600</b>

<sup>a</sup> Commuter operations and intercity passenger service topics are applicable to and appear in two different environmental impact categories. However, these two topics are counted only once in figuring the total number of comments on topics.

### 6.3 DRAFT EIS DISTRIBUTION

The Board regulations identify types of agencies and officials to receive environmental documentation (49 CFR Part 1105.7). Additionally, NEPA regulations identify appropriate distribution (40 CFR Part 1500 to 1508). This section lists the agencies, officials, and other interested parties receiving the Draft EIS on the proposed Conrail Acquisition. SEA also provided those on the notification list with specific information about how to comment on this Draft EIS.

SEA published in the Federal Register a Notice of Availability of the Draft EIS to maximize public awareness of the availability of the document and to provide instructions on how to comment on the Draft EIS. The Environmental Protection Agency also published a notice of availability of the Draft EIS in the Federal Register in accordance with the National Environmental Policy Act. In addition to the Federal Register notice, SEA concurrently mailed the Draft EIS to more than 2,000 Federal, state, and local elected officials, agencies, and other

interested parties. SEA will also send press releases and update the Web site with information about the availability of the Draft EIS and how to comment on the Draft EIS.

Concurrent with issuing the Draft EIS, SEA will also mail notification packets to all counties which have Conrail, CSX, or NS lines within their boundaries and all cities which have been identified on rail line segments as meeting Board thresholds for environmental analysis.

### **6.3.1 Recipient List: Draft EIS**

SEA served a copy of the Draft EIS to the following organizations:

#### **Federal Agencies**

- Advisory Council on Historic Preservation.
- U.S. Army Corps of Engineers.
  - Headquarters.
  - 22 District Offices in the affected states.
- U.S. Department of Agriculture.
  - Forest Service.
  - Natural Resources Conservation Service.
- U.S. Department of Commerce.
  - National Oceanic and Atmospheric Administration.
  - National Geodetic Survey.
  - National Marine Fisheries Service.
- U.S. Department of the Interior.
  - Bureau of Indian Affairs.
  - Bureau of Land Management.
  - National Park Service.
  - Office of Environmental Project Review.
  - U.S. Fish and Wildlife Service.
- U.S. Department of Transportation.
  - Secretary's Office.
  - Federal Railroad Administration
  - Federal Transit Administration.
  - Federal Highway Administration.
  - U.S. Coast Guard.
- U.S. Environmental Protection Agency.
  - Office of Federal Activities.
  - Regions 1-7.

**Regional Agencies** (in potentially affected counties)

- Port Authorities (including inland ports).
- Planning Organizations - each area representing an affected county, or groups of counties.

**State Agencies** (in the 24 state areas affected and Washington, D.C.)

- Coastal Zone Management offices.
- Departments of Transportation.
- Departments of Environmental Protection.
- Departments of Natural Resources.
- State Historic Preservation Offices.
- State Public Service/Utility Commissions.
- State Clearinghouses.

**County/Local Governments** (of the potentially affected counties)

- County Executive (or Administrator or Manager).
- City Manager (or Mayor).

**Passenger Rail Agencies**

- Amtrak.
- Commuter Rail Transit Agencies.

**Freight Railroads - Class I**

- BC Rail Ltd.
- Burlington Northern & Santa Fe Railway Company.
- CP Rail System - Soo Line.
- CSX Transportation, Inc.
- Canadian National Railroad.
- Canadian Pacific Railway.
- Consolidated Rail Corporation.
- Illinois Central Railroad.
- Kansas City Southern Railway.
- Norfolk Southern Railroad.
- Union Pacific Railroad.

### **Organizations**

- American Public Transit Association.
- American Trucking Association.
- Association of American Railroads.
- American Short Line Railroad Association.
- American Railway and Airway Supervisors Association.
- National Railway Historical Society.
- National Association of Railroad and Environmental Testing.
- National Trust for Historic Preservation.
- The Nature Conservancy.
- National Rails-to-Trails Conservancy.
- Women Like Us.
- Sierra Club.

### **Unions**

- Brotherhood of Locomotive Engineers.
- Brotherhood of Boilermakers and Blacksmiths.
- Brotherhood of Railway Carmen.
- Brotherhood of Maintenance of Way Employees.
- Brotherhood of Railroad Signalmen.
- International Association of Machinists and Aerospace Workers.
- International Brotherhood of Firemen and Oilers.
- International Brotherhood of Electrical Workers.
- International Brotherhood of Locomotive Engineers.
- International Longshoremens' Union.
- International Association of Bridge, Structural & Ornamental Iron Workers.
- Hotel and Restaurant Employees International.
- Railroad and Shipyard Workers.
- Transportation Communications Union.
- United Transportation Union.
- AFL-CIO.

### **Other**

- Individuals and organizations that specifically request a copy of the Draft EIS.

### **Parties of Record**

- More than 250 Parties of Record (as identified in Board Decision No. 21).

### 6.3.2 Recipient List: Notice of Availability of the Draft EIS

In addition to distributing the Draft EIS, SEA distributed the Notice of Availability of the Draft EIS to the following individuals and organizations:

#### **Federal** (in all 24 potentially affected states)

- U.S. Senators.
- U.S. House of Representatives.

#### **State** (in all 24 potentially affected states)

- Governors.
- State Senators.
- State Representatives.

#### **County** (in all counties that have Conrail, CSX or NS rail lines)

- Chief County Elected Officials (Commission Chair or Chief Commissioner, except in counties where the chief elected official is receiving Draft EIS as listed above).
- Public Information Officers.
- County Planning Directors.
- County Public Works Directors.
- County Engineers.

#### **City** (all cities which have been identified on rail line segments as meeting the Board's thresholds for environmental analysis)

- City or Town Managers or Administrators.
- Mayors.

#### **Media**

- Key individuals and interested parties identified through media monitoring.

### 6.3.3 Draft EIS Comment Period

SEA will accept comments on the Draft EIS during a 45-day comment period. All comment must be received in writing, Government agencies and business must submit 1 original and 10 copies, citizens may submit only one original, to be considered in the preparation of the Final EIS. All agencies, organizations, and individuals should submit their written comments by 45 days from the date of EPA's Federal Register Notice of Availability of this Draft EIS:

Office of the Secretary  
Case Control Unit  
STB Finance Docket No. 33388  
Surface Transportation Board  
1925 K Street, N.W.  
Washington, DC 20423-0001

In the lower left-hand corner of the envelope, include:

Attention: Elaine K. Kaiser  
Environmental Project Director  
Section of Environmental Analysis

## CHAPTER 7

### SEA's Preliminary Recommended Environmental Mitigation

This chapter is divided into two sections. Section 7.1 provides background information to assist the public in responding to the mitigation measures recommended by SEA at this time. Section 7.2 lists the specific preliminary mitigation measures that SEA is currently recommending based on its independent environmental analysis, review of information available to date, and consideration of public comments received. These preliminary mitigation measures are grouped into six categories to facilitate public review. The six categories are:

1. System-Wide Mitigation.
2. Regional Mitigation.
3. Local or Site-Specific Mitigation.
4. Mitigation for Specific Communities with Unique Circumstances.<sup>1</sup>
5. General Mitigation for Proposed Constructions and Abandonments.
6. Site-Specific Mitigation for Proposed Constructions and Abandonments.

#### 7.1 OVERVIEW OF SEA'S APPROACH TO MITIGATION

##### 7.1.1 Background

The Environmental Impact Statement (EIS) process for the proposed Conrail Acquisition will allow the Board to take the "hard look" at environmental consequences required for this complex and geographically far-reaching project. This environmental review process will assist the Board in making a decision to: (1) approve, (2) disapprove, or (3) approve the proposed Acquisition

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<sup>1</sup> This category includes communities that did not trigger any SEA environmental thresholds for significant environmental impacts, but nevertheless, appear to warrant mitigation because of their unique circumstances.

with conditions. The Board will make its decision only after it has considered all the public comments, the Draft EIS, and the Final EIS which will include SEA's final environmental recommendations.

This Draft EIS describes the proposed 44,000 mile Conrail Acquisition, explains how SEA identified and analyzed potential environmental impacts of the proposed project, discusses the actual environmental impacts identified by SEA thus far, and presents possible ways to mitigate project-related environmental impacts. More specifically, Chapters 1 through 3 describe the proposed project, SEA's methodology for analyzing environmental impacts, and the types of mitigation measures that SEA considered. Chapters 4 and 5 discuss the potential system-wide, regional, and site-specific environmental impacts identified to date. Chapter 6 describes SEA's extensive public outreach and agency consultation process. The Appendices contain more detailed technical information and background materials.

The preliminary mitigation measures that SEA recommends in this Chapter are based on the results of SEA's extensive analysis as described in Chapters 1 through 6. In developing the proposed mitigation measures, SEA considered the proposed Acquisition on system-wide, regional, and local levels. The summary preliminary recommended mitigation table is presented in the text in the next section, while other tables appear at the end of this chapter.

On a system-wide basis, SEA's environmental analysis identified no significant system-wide environmental impacts as a result of the proposed Conrail Acquisition, assuming that the CSX, NS and Conrail systems can be safely integrated, as discussed below. Indeed, there would be some positive impacts on a system-wide basis such as reduced fuel use, reduced system-wide air emissions, reduced highway congestion, and a more efficient rail transportation system. Nevertheless, SEA has recommended a broad based system-wide mitigation measure to further enhance safety.

On the regional and local levels, SEA identified significant impacts that could result from the proposed Acquisition and could warrant mitigation. As a result, most of the recommended mitigation in this Draft EIS applies to regional and local environmental impacts.

### **7.1.2 Project Activities and Impacts**

As previously explained, the proposed transaction covers over 44,000 miles of rail lines and related railroad facilities, covering the eastern part of the United States. As a result, the scope of this project is substantial. In reviewing this Draft EIS, it is important to understand the types of railroad activities associated with the project that could result in environmental impacts and, therefore, were analyzed by SEA in this document. These activities are changes in train traffic on rail lines, changes in activity at rail yards and intermodal facilities, and rail line abandonment

and construction projects<sup>2</sup>, all of which would result from the proposed Acquisition. Potential environmental impacts associated with these types of activities can include safety, transportation including passenger service, air quality, noise, natural resources, land use including Native American concerns, historic and cultural resources, socioeconomic effects directly related to physical changes in the environment, and environmental justice.

SEA used the Board's thresholds for environmental analysis to determine which Acquisition-related activities to analyze for environmental impacts. These thresholds have proven during prior railroad merger and acquisition environmental reviews to be a conservative and practical means to focus on those activities and areas with potential for significant environmental impacts.

### Surface Transportation Board's Thresholds for Environmental Analysis

Activity/Site	Air Quality Attainment Areas <sup>a</sup>	Air Quality Nonattainment Areas <sup>a</sup>	Noise
<b>Rail Line Segments</b>	Increase of 8 trains per day or 100% increase in annual gross ton miles.	Increase of 3 trains per day or 50% increase in annual gross ton miles.	Increase of 8 trains per day or 100% increase in annual gross ton miles.
<b>Rail Yards</b>	Increase of 100% in carload activity per day.	Increase of 20% in carload activity per day.	Increase of 100% in carload activity per day.
<b>Intermodal Facilities</b>	Increase of 50 trucks per day or 10% increase in average daily traffic volume on any affected road segment.	Increase of 50 trucks per day or 10% increase in average daily traffic volume on any affected road segment.	Increase of 50 trucks per day or 10% increase in average daily traffic volume on any affected road segment.

<sup>a</sup> Attainment areas and non-attainment areas as defined by the Clean Air Act.

### 7.1.3 Scope of the Board's Conditioning Power

In assessing SEA's recommended mitigation, it is important to understand that the Board does not have unlimited authority to impose conditions. As a government agency, the Board can only impose conditions that are consistent with its statutory authority. Accordingly, any conditions

<sup>2</sup> Potential environmental impacts of the physical construction of the Seven Separate Connections at issue in STB Finance Docket No. 33388 (Sub Nos. 1-7) were covered in separate Environmental Assessments that were prepared by SEA prior to and separate from this Draft EIS. By a decision issued November 25, 1997, the Board approved, subject to certain environmental conditions, the physical construction of the seven connections totaling approximately four miles in the States of Indiana and Ohio. Proposed mitigation for the operational impacts associated with these projects is covered in Recommended Mitigation Nos. 47-49. Therefore, this Draft EIS only addresses proposed operations over these connections. For more details see Decision No. 9 and Decision (in Sub Nos. 1-7) dated November 25, 1997, included in Appendix T.

the Board imposes must be directly related to the transaction it is licensing, must be reasonable, and must be supported by the record before the Board. Thus, the Board's practice consistently has been to mitigate only those impacts that result directly from the proposed action. The Board does not have authority to require mitigation of preexisting conditions, such as existing railroad operations or land development in the vicinity of the railroads.

As an alternative to the mitigation that the Board would unilaterally impose on CSX and NS, SEA strongly encourages the railroads and affected parties to negotiate mutually-acceptable agreements. The Board could then impose compliance with the terms of any mutually-acceptable binding agreement as an environmental condition in any decision approving the proposed Acquisition.

#### **7.1.4 Safety**

Safety is of paramount importance to the Board. Accordingly, much of the recommended mitigation in this Draft EIS addresses the safety impacts associated with the proposed railroad operations. Additionally, in response to a request by the Federal Railroad Administration (FRA), on November 3, 1997 the Board directed CSX, NS, and Conrail to submit detailed "Safety Integration Plans" explaining how they propose to ensure the safe integration of their separate systems. Because these plans were not due until December 3, 1997, the Draft EIS does not contain an analysis of these plans. To facilitate public review of this important issue, the complete Safety Integration Plans are included in Volume 2 of this Draft EIS. We encourage FRA and the public to review these plans carefully and comment on their sufficiency. Like all comments on the Draft EIS, any comments on the Safety Integration Plans must be submitted to SEA no later than the end of the 45-day comment period. SEA will fully consider these comments in preparing the Final EIS, which will contain SEA's final safety recommendations.

With respect to safety of hazardous materials transportation, CSX formally advised SEA by a letter dated November 24, 1997, that the data they previously provided regarding hazardous materials transportation may have overstated the amount of this traffic by 20 percent or more. (See Appendix B.) CSX plans to provide SEA with corrected data during the comment period for this Draft EIS. SEA will verify this data and conduct further analysis, as appropriate. Therefore, the mitigation recommendations here that address hazardous materials transportation may be modified in the Final EIS.

#### **7.1.5 Traffic Delay at Highway/Rail At-Grade Crossings**

One of SEA's major concerns in this Draft EIS is the potential delay of vehicular traffic at highway/rail at-grade crossings. This delay relates to general type vehicles such as autos, trucks and buses as well as emergency response vehicles. SEA established criteria for assessing potentially significant impacts on traffic delay at highway/rail at-grade crossings based on (1) the increase in average delay per stopped vehicle or (2) the increase in average delay on a daily

basis for all vehicles. For average delay per stopped vehicle at highway/rail at-grade crossings, SEA considered the environmental impact significant if the post-Acquisition increase in delay would be 30 seconds or more. For daily average delay for all vehicles, SEA considered the impact significant if the post-Acquisition traffic level of service at a highway/rail at-grade crossing would be at Level of Service<sup>3</sup> (LOS) "E" or "F" regardless of the pre-Acquisition LOS, or would decline from a pre-Acquisition LOS of "C" or better to a post-Acquisition LOS of "D." SEA has preliminarily identified 38 crossings in the States of Illinois, Indiana, Kentucky, Maryland, Ohio, and Pennsylvania that would meet or exceed this level of significance. (See Table 7-7, "Preliminary Highway/Rail At-Grade Crossings That May Warrant Traffic Delay Mitigation.")

SEA has considered four mitigation strategies to address significant highway/rail at-grade crossing traffic delay impacts at these 38 highway/rail at-grade crossings: (1) increased train speeds consistent with safe operating practices, (2) possible diversion of train traffic to an alternate route, (3) separated grade crossings (constructing overpasses or underpasses), and (4) consultation to develop alternative mitigation.

### **(1) Increased Train Speed**

Where local operating conditions allow for increased train speeds without compromising safety, increasing train speed generally reduces the time that a highway/rail at-grade crossing is blocked when a train passes. Where there is an ability to safely increase train speeds, this type of mitigation could offset any Acquisition-related increase in total traffic delay resulting from additional trains. Accordingly, for those crossings where potential traffic delay impacts would be significant, SEA first evaluated if increased train speed would be a feasible option for reducing or eliminating the traffic delay impacts. There are eight highway/rail at-grade crossings in the States of Indiana, Maryland, and Ohio where train track and signal conditions would permit safe operations at increased train speeds. (See Table 7-7.) At this time, SEA recommends that the Board impose on any decision approving the proposed Conrail Acquisition a condition requiring the acquiring railroad to implement the necessary physical and operating improvements to increase the operating train speeds in the vicinity of these eight highway/rail at-grade crossings. (See Recommended Mitigation No. 9.)

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<sup>3</sup> Level of Service (LOS) is a standard measure of traffic delay measured on a scale of "A" to "F." The LOS is defined by the Transportation Research Board's Highway Capacity Manual, Special Report 209, Third Edition, Updated 1994. The letter grades represent traffic flow ranging from "A" (free flowing) to "F" (severely congested) as measured by the average delay experienced by all vehicles at the highway/rail at-grade crossing.

## **(2) Possible Diversion of Train Traffic to an Alternate Route**

There are two locations where there are on-going relocation plans to divert train traffic to alternative routes. These communities are Erie, Pennsylvania and Lafayette, Indiana.

In Erie, Pennsylvania, SEA believes that existing plans developed by CSX and NS to reroute NS train traffic would effectively eliminate traffic delay impacts for five highway/rail at-grade crossings in downtown Erie that would otherwise be candidates for separated grade crossings. (See Table 7-7.) Specifically, SEA is reviewing the NS and CSX plan for NS to construct new tracks and reroute its operations to the CSX right-of-way through Erie, which has mostly separated grade crossings. (See Appendix S.) This rerouting would remove train traffic from the center of 19<sup>th</sup> Street in downtown Erie and eliminate highway/rail at-grade crossing traffic delay impacts at the five crossings. SEA's preliminary view is that this rerouting would be appropriate mitigation for the Acquisition-related traffic delay and safety impacts at these crossings as well as along the center of 19<sup>th</sup> Street. At this time, SEA requests that CSX and NS report to the Board by the close of the public comment period on this Draft EIS on the progress of plans to reroute this traffic and the schedule for implementing the plan.

In Lafayette, Indiana, SEA notes that CSX, NS, and the City of Lafayette are in the process of implementing a comprehensive program to relocate and consolidate rail lines through the City into a single rail corridor with separated grade crossings. This project, which has been planned for several years, would eliminate significant Acquisition-related traffic delay impacts at the ten highway/rail at-grade crossings in Tippecanoe County (Lafayette), Indiana. (See Table 7-7.) Therefore, at this time SEA requests that the State of Indiana, the City of Lafayette, and the Applicants jointly develop an "interim" plan to mitigate these Acquisition-related traffic delay impacts until the track relocation program can be fully implemented. SEA welcomes public comments from affected parties on possible "interim" measures to mitigate these traffic delay impacts.

## **(3) Separated Grade Crossings**

Separated grade crossings generally improve safety and traffic flow at highway/rail at-grade crossings by eliminating traffic delay and any potential for train/vehicle accidents. SEA developed three criteria to identify the highway/rail at-grade crossings where a separated grade crossing appears warranted. SEA's preliminary determination is that a separated grade crossing may be warranted if each of the following criteria is met:

1. Acquisition-related train traffic would increase by at least eight trains per day.
2. Estimated post-Acquisition roadway traffic LOS would fall to an "E" or "F" because of increased post-Acquisition train traffic.

3. Sufficient increase in train speeds needed to mitigate Acquisition-related traffic delay impacts would not be feasible.

SEA believes these criteria identify the highway/rail at-grade crossings where there would be a significant increase in traffic delay resulting from the proposed Conrail Acquisition. At each of these highway/rail at-grade crossings, the projected Acquisition-related increase in train traffic would be at least eight trains per day, increased train speeds would not be feasible, and the resulting traffic LOS would be unacceptable ("E" or "F"). As a result, a separated grade crossing would appear to be warranted.

SEA originally identified ten highway/rail at-grade crossings in the States of Illinois, Indiana, Kentucky and Pennsylvania where it appears that Acquisition-related changes in train traffic would meet these criteria for separated grade crossings. (See Table 7-7.) However, because of plans to reroute train traffic in Erie, Pennsylvania, as discussed above, there are five remaining candidates for separated grade crossings in SEA's preliminary listing.

SEA notes that the Board generally does not determine where to locate a separated grade crossing and how the separated grade crossing is to be funded. These matters are typically determined through a comprehensive state or local highway planning process involving the state department of transportation (if the roadway is a state highway), the affected communities, and the railroad. The states have developed priority lists for separated grade crossings, based on traffic delay and safety factors. Each state has also established a percentage share of the construction cost for a separated grade crossing that is to be borne by the railroad. This percentage varies by state, but is typically five to ten percent. In some cases the railroads voluntarily agree to bear a higher share of the cost.

Based on the information available, however, SEA believes that a more far-reaching approach may be warranted for the five highway/rail at-grade crossings identified above. SEA believes it would be appropriate for the Applicants to provide more funding than railroads would ordinarily provide for these five preliminary candidates for separated grade crossings. It appears that the best possible way to reach agreement on a separated grade crossing and determine how to share costs would be to require the railroad to negotiate with the affected communities and the appropriate state or local agencies to determine what is appropriate, given the facts and circumstances of each particular highway/rail at-grade crossing.<sup>4</sup> Therefore, SEA is proposing and inviting comments on a mediation and binding arbitration process to determine the funding allocation, which is described below.

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<sup>4</sup> SEA understands that constructing a separated grade crossing requires coordination with local traffic planning departments, local approval and permitting agencies, and possible property acquisition. Therefore, it is not SEA's intent at this time to recommend that the Board require a separated grade crossing where the local community finds this approach undesirable or is unwilling to fund an appropriate share.

SEA recommends that the Applicants consult with parties in the affected communities of (1) Calumet Park, Illinois (2 crossings); (2) Garrett, Indiana; (3) Hopkinsville, Kentucky; and (4) Madisonville, Kentucky regarding these five highway/rail at-grade crossings and the appropriate state and local agencies, beginning as soon as possible after the issuance of this Draft EIS. If these communities are interested in exploring options for separated grade crossings, SEA further recommends that the Applicants and communities pursue mediation, if needed, to facilitate a mutually-acceptable binding agreement on respective shares of funding for separated grade crossings. If the parties reach a mutually-acceptable agreement by the time SEA issues the Final EIS, SEA will recommend that the Board impose a condition in any decision approving this project requiring the Applicants to implement the terms of any such agreement.

In the event that a mutually-acceptable binding agreement is not reached by the time the Final EIS is issued, SEA's intent at this time is to recommend that the Board impose a binding arbitration condition in any decision approving the proposed Acquisition. This condition would require the Applicants to submit to binding arbitration, and assume the costs of such arbitration, with respect to the funding of separated grade crossings. In the Final EIS, SEA will provide a final list of locations where separated grade crossings would be warranted. As noted above, if any agreements are reached, SEA will recommend the Board require that the Applicants comply with the terms of any such agreement. For the communities on the final list where parties have not reached a negotiated agreement, SEA intends to recommend that the Board require the Applicants to participate in a binding arbitration process to determine the funding allocation for those communities on the final list.

SEA invites public comments on this mediation and binding arbitration process to ensure construction of separated grade crossings at appropriate locations where the communities want these crossings. Also, SEA welcomes public comments on SEA's preliminary list of locations where a separated grade crossing appears to be warranted.

#### **(4) Consultation to Develop Alternative Mitigation**

Based on the available information, SEA originally identified 20 highway/rail at-grade crossings in the States of Illinois, Indiana, Ohio, and Pennsylvania which appear to require mitigation but would not meet SEA's criteria for a separated grade crossing. In addition, local agreements or ordinances may preclude recommending increased train speeds without consultation with the affected communities. The traffic delays at ten of these highway/rail at-grade crossings would be mitigated by the implementation of the City of Lafayette's railroad relocation project discussed above.

Accordingly, for the remaining ten highway/rail at-grade crossings (see Table 7-7), SEA encourages the Applicants to meet with local officials and appropriate departments of transportation as soon as possible to negotiate traditional separated grade crossing agreements or identify other mutually-acceptable approaches to addressing Acquisition-related traffic delay

impacts. SEA requests that the Applicants report to SEA on the results of these consultations by the close of the public comment period for this Draft EIS. SEA also welcomes comments from the affected communities on appropriate measures to address these traffic delay impacts. The highway/rail at-grade crossings where this consultation is recommended are shown in Table 7-7.

### **Public Comments — SEA's Approach to Traffic Delay Impacts**

SEA emphasizes that these traffic delay mitigation recommendations are preliminary. SEA invites comments on the criteria for determining where a separated grade crossing would be warranted. Communities that SEA has identified in this Draft EIS as appropriate candidates for consultation with the Applicants also can explain, in their comments to this Draft EIS, whether they favor construction of a separated grade crossing in the area and why they believe they meet the criteria for inclusion on this list. At the same time, the Applicants can submit comments. Based on its review of the comments and independent investigation, SEA will adopt final recommendations in the Final EIS to address potential traffic delay impacts.

#### **7.1.6 Preliminary Nature of Mitigation**

SEA emphasizes that the recommended mitigation measures in this Draft EIS are **preliminary**. SEA invites public comment on these proposed mitigation measures as well as alternative mitigation. In order for SEA to effectively assess the comments, it is critical that the public be specific regarding desired mitigation and provide specific reasons why the suggested mitigation would be appropriate. In addition, SEA requests that the railroads, communities, and other interested parties advise SEA of the status of any negotiations to address environmental concerns. If the parties execute a mutually-acceptable binding agreement, they should immediately advise SEA in writing.

Several of the preliminary mitigation measures that follow direct the Applicants to consult with local communities to develop mutually-acceptable mitigation before the Board issues a decision on the proposed Acquisition. Based on the results of these consultations, for the Final EIS SEA will modify these preliminary mitigation measures and the final list of communities as appropriate.

SEA will make its final recommendations for mitigation in the Final EIS after having the opportunity to consider all public comments on the Draft EIS, conduct further environmental analysis and agency consultations, and conduct additional site visits as appropriate. The Board will make its decision regarding this project and any conditions, including environmental conditions it might impose, based on its consideration of the public comments, the Draft EIS, and the Final EIS. In considering whether to approve the proposed Acquisition, the Board must weigh and balance the anticipated public benefits to the national transportation system, interstate commerce, and affected regions and communities against potential adverse effects. As part of

that analysis, the Board considers the potential environmental effects, including both beneficial and adverse impacts.

## 7.2 RECOMMENDED PRELIMINARY MITIGATION MEASURES

Based on independent environmental analysis, consideration of the information available to date, and review of public comments, SEA's preliminary recommendation is that the Board impose, as conditions to any decision approving the proposed Conrail Acquisition, the following environmental mitigation measures. SEA has designed these preliminary measures to address potential Acquisition-related environmental impacts. They are presented below in six categories: (1) System-Wide Mitigation; (2) Regional Mitigation; (3) Local or Site-Specific Mitigation; (4) Mitigation for Specific Communities with Unique Circumstances; (5) General Mitigation for Proposed Constructions and Abandonments; and (6) Site-Specific Mitigation for Proposed Constructions and Abandonments. The tables included at the end of these recommended preliminary mitigation measures list the specific rail line segments and highway/rail at-grade crossings to which some of the local or site-specific recommended mitigation measures apply. Table 7-1 below identifies the recommended mitigation measures for each state.

**Table 7-1  
Preliminary Recommended Mitigation by State**

State	Preliminary Recommended Mitigation
Alabama	Recommendations 3 (A, B & C), 4 (A & B), and 5.
Connecticut	No significant impacts identified, and no mitigation recommended at this time with the exception of the System-Wide and General Mitigation Recommendations.
Delaware	Recommendations 13 and 25.
Florida	Recommendations 3 (A, B & C) and 5.
Georgia	Recommendations 2A, 3 (A, B & C), 4 (A & B), and 5.
Illinois	Recommendations 2B, 4 (A & B), 5, 8, 10, 11, 14, 16, 19, 24, 44, 45, 47, and 48.
Indiana	Recommendations 2A, 2B, 3 (A, B & C), 4 (A & B), 5, 7 (A & B), 8, 9, 10, 11, 19, 23, 26, 27, 46, 47, 48, and 49.
Kentucky	Recommendations 3 (A, B & C), 4 (A & B), 5, 8, and 10.
Louisiana	Recommendations 4 (A & B) and 5.
Maryland	Recommendations 2A, 3 (A, B & C), 4 (A & B), 5, 8, 9, and 19.
Massachusetts	No significant impacts identified, and no mitigation recommended at this time with the exception of the System-Wide and General Mitigation Recommendations.
Michigan	Recommendations 2A, 3 (A, B & C), 4 (A & B), 5, 8, and 12.
Mississippi	Recommendations 4 (A & B) and 5.

**Table 7-1  
Preliminary Recommended Mitigation by State**

State	Preliminary Recommended Mitigation
Missouri	Recommendations 3 (A, B & C) and 5.
New Jersey	Recommendations 3 (A, B & C), 4 (A & B), and 5.
New York	Recommendations 2A, 3 (A, B & C), 4 (A & B), 5, and 8.
North Carolina	Recommendations 2A, 3 (A, B & C), 4 (A & B), and 5.
Ohio	Recommendations 3 (A, B & C), 4 (A & B), 5, 7 (A & B), 8, 9, 11, 12, 15, 17, 18, 19, 20, 21, 42, 43 (A & B), 46, 47, 48, and 49.
Pennsylvania	Recommendations 3 (A, B & C), 4 (A & B), 5, 7 (A & B), 8, 11, 19, and 22 (A, B & C).
Rhode Island	No significant impacts identified, and no mitigation recommended at this time with the exception of the System-Wide and General Mitigation Recommendations.
South Carolina	Recommendations 3 (A, B & C), 4 (A & B), and 5.
Tennessee	Recommendations 3 (A, B & C), 4 (A & B), and 5.
Virginia	Recommendations 2A, 3 (A, B & C), 5, and 8.
Washington, DC	Recommendations 2A, 3 (A, B & C), and 19.
West Virginia	No significant impacts identified, and no mitigation recommended at this time with the exception of the System-Wide and General Mitigation Recommendations.
System-wide or General Recommendations	Recommendations 1, 6, and 28-41.

Note that the site identification numbers that appear in the Tables 7-2 through 7-9 were developed to facilitate identification of specific rail line segments and railroad facilities such as rail yards, throughout the Draft EIS. In these segment identification numbers, "C" represents CSX, "N" represents Norfolk Southern, and "S" represents proposed Shared Assets Areas of CSX, NS, and Conrail as well as Amtrak's Northeast Corridor (NEC) that would also be shared by CSX and NS. For example, the Washington, D.C. to Point of Rocks, Maryland rail line segment belongs to CSX and is designated as "C-003."

### 7.2.1 Recommended System-wide Mitigation

#### Safety: Highway/Rail At-Grade Crossings

1. For all highway/rail at-grade crossings with active warning device signals, including those in the Shared Assets Areas, CSX and NS shall provide prominently displayed instructions designating a toll-free telephone number and a unique highway/rail at-grade crossing

identification number to report warning device malfunctions. NS and CSX shall provide 24-hour, seven-day-a-week staffing to respond to calls to the toll-free telephone number.

### **7.2.2 Recommended Regional Mitigation**

#### **Safety: Passenger Rail Operations**

2(A). To enhance passenger rail safety, CSX and NS shall establish passenger trains as "superior" trains on passenger rail line segments as listed in Table 7-3, and as listed below:

1. Washington, D.C. to Point of Rocks, Maryland (C-003).
2. Savannah, Georgia to Jesup, Georgia (C-346).
3. Weldon, North Carolina to Rocky Mount, North Carolina (C-334).
4. Fredericksburg, Virginia to Potomac Yard, Virginia (C-101).
5. South Richmond, Virginia to Weldon, North Carolina (C-103).
6. Jackson, Michigan to Kalamazoo, Michigan (N-120).
7. West Detroit, Michigan to Jackson, Michigan (N-121).
8. Campbell Hall, New York to Port Jervis, New York (N-063).
9. Kalamazoo, Michigan to Porter, Indiana (N-497), should NS become responsible for train dispatching over this rail line segment.

By establishing these passenger trains as "superior," trains moving in the same or opposite direction on the same track would be clear of the track at least 15 minutes before and 15 minutes after the expected arrival of a passenger train at any point. This requirement would not apply when any train is moving in the opposite direction away from a passenger train.

2(B). SEA's preliminary recommendation is that this mitigation would also apply to the NS Chicago, Illinois to Porter, Indiana rail corridor if Canadian Pacific obtains trackage or haulage rights over these rail line segments.

#### **Safety: Hazardous Materials Transportation**

CSX recently advised SEA in a letter dated November 24, 1997 (see Appendix B) that the hazardous materials data that CSX provided SEA may overstate the post-Acquisition volume of

hazardous materials transported along the rail line segments listed in Table 7-5. Accordingly, the number of rail line segments discussed in Recommended Mitigation Nos. 3 (A-C), 4 (A-B), and 5 below may change in the Final EIS.

- 3(A). Before increasing the number of rail cars carrying hazardous materials on 65 rail line segments that would become "Key Routes" as a result of the proposed Acquisition, CSX and NS shall comply with the Association of American Railroads (AAR) "Key Route" guidelines ("Recommended Railroad Operating Practices for Transportation of Hazardous Materials," AAR Circular No. OT-55-B). In addition, NS and CSX shall prepare a Hazardous Materials Emergency Response Plan for each local emergency response organization along these rail line segments. Some of these rail line segments cross state lines. These rail line segments are listed in Table 7-5, and are located in the States of Alabama, Florida, Georgia, Indiana, Kentucky, Maryland, Michigan, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and the District of Columbia.

"Key Routes" are those routes that carry more than 10,000 hazardous materials rail cars per year. The AAR "Key Route" guidelines include measures for visual rail defect inspections at least twice per week, annual employee training in hazardous materials handling and equipment inspection, defective wheel bearing detectors at least every 40 miles of track, and other preventive measures.

- 3(B). Before increasing the number of rail cars carrying hazardous materials on any train, CSX and NS shall comply with the Association of American Railroads (AAR) "Key Train" guidelines ("Recommended Railroad Operating Practices for Transportation of Hazardous Materials," AAR Circular No. OT-55-B).

"Key Trains" are any trains with five or more tank car loads of chemicals classified as a Poison Inhalation Hazard (PIH) or a total of 20 rail cars with any combination of PIH, flammable gas, explosives, or environmentally sensitive chemicals. The AAR "Key Train" guidelines include measures for a maximum operating speed of 50 mph and full train inspections by the train crew whenever a train is stopped by an emergency application of the train air brake, or a reported defect by a trackside defective bearing detector.

- 3(C). If CSX or NS have more stringent requirements than the provisions of the AAR "Key Route" and "Key Train" guidelines, CSX and NS shall comply with their own requirements.

- 4(A). Before increasing the number of rail cars carrying hazardous materials on the 52 rail line segments that would be "Major Key Routes" as a result of the proposed Acquisition, CSX and NS shall prepare Hazardous Materials Emergency Response Plans for each local emergency response organization along these rail line segments, which were

identified in Table 7-6. A "Major Key Route" is defined by SEA as a route on which the hazardous materials rail car traffic would double and exceed a volume of 20,000 rail cars per year as a result of the proposed Acquisition. Some of these 52 rail line segments cross state lines. These rail line segments and corridors are located in the States of Alabama, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Mississippi, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, and Tennessee.

- 4(B). CSX and NS shall implement a real time or desktop simulation emergency response drill with voluntary participation of local emergency response teams at least once every two years on each "Major Key Route."
5. CSX and NS shall provide toll-free telephone numbers to all emergency response organizations for each community located along the 65 rail line segments identified in Recommended Mitigation No. 3 (A-C) and the 52 rail line segments identified in Recommended Mitigation No. 4 (A-B). These telephone numbers shall provide 24-hour access to CSX and NS dispatch centers where local emergency response personnel could quickly obtain information regarding the transport of hazardous materials on a given train and appropriate emergency response procedures in the event of a train accident or hazardous materials release. This telephone number shall not be provided to the general public.
6. CSX and NS shall establish a formal Failure Mode and Effects Analysis (FMEA) program at CSX, NS, and Shared Assets Areas rail yards and intermodal facilities to address the sources and consequences of spills of both stored hazardous materials and hazardous materials in transportation. The purpose of the FMEA program is to reduce the risk of spills of hazardous materials by identifying potential causes for such spills and eliminating them prior to any possible incident.

### **7.2.3 Recommended Local or Site-Specific Mitigation**

#### **Safety: Freight Rail Operations**

- 7(A). To reduce the risk of train accidents and derailments, CSX and NS shall comply with the proposed requirement in FRA's proposed rule for "ton-mile based" inspections on the seven rail line segments that are listed below and in Table 7-2 in the States of Indiana, Ohio, and Pennsylvania. (See 49 CFR Part 213.237, Docket No. RST-90-1.) CSX and NS shall follow this standard until FRA promulgates a final rule on track defect inspection. Specifically, this proposed rule calls for railroads to conduct track inspections to detect rail flaws on a rail line segment at least once every 40 million gross ton-miles of rail traffic, or to inspect annually, whichever is more frequent. If FRA's final rule requires a different standard, then CSX and NS shall comply with the standard in the final rule.

7(B). CSX and NS shall train their mechanical inspectors annually at those locations (e.g., rail yards and initial terminals) that dispatch trains over these seven rail line segments. Also, CSX and NS shall train annually those track inspectors who are responsible for inspecting these seven rail line segments. These preliminary mitigation measures apply to the following rail line segments:

1. CP 501 to Indiana Harbor, Indiana (N-042).
2. Berea to Greenwich, Ohio (C-061).
3. Greenwich to Willard, Ohio (C-068).
4. Willard to Fostoria, Ohio (C-075).
5. Oak Harbor to Miami, Ohio (N-077).
6. Miami to Airline, Ohio (N-086).
7. Rutherford to Harrisburg, Pennsylvania (N-090).

**Safety: Highway/Rail At-Grade Crossings**

8. CSX and NS shall upgrade warning devices at 118 highway/rail at-grade crossings in the States of Illinois, Indiana, Kentucky, Maryland, Michigan, New York, Ohio, Pennsylvania, and Virginia as listed and specified in Table 7-4.

**Transportation: Highway/Rail At-Grade Crossing Delay**

9. CSX and NS shall implement track improvements, train signals, and operating procedures that are necessary to increase train timetable speeds, consistent with safe operating practices, at a total of eight highway/rail at-grade crossings located in the States of Indiana, Maryland, and Ohio. Table 7-7 lists these crossings as well as SEA's proposed train speed increases.
10. CSX shall consult with appropriate authorities in the States of Illinois, Indiana, and Kentucky where five separated grade crossings may be warranted to mitigate Acquisition-related traffic delay impacts. Specifically, CSX shall consult with the following:
  - a. Cook County, the City of Calumet Park, the Illinois Department of Transportation, and other appropriate authorities and communities to address traffic delay at the Dixie Highway and Broadway-135<sup>th</sup> Street highway/rail at-grade crossings in Calumet Park, Illinois.

- b. DeKalb County, the City of Garrett, the Indiana Department of Transportation, and other appropriate parties to address traffic delay at the Randolph Street highway/rail at-grade crossing in Garrett, Indiana.
- c. Christian County, the City of Hopkinsville, the Kentucky Department of Transportation, and other appropriate parties to address traffic delay at the East 9<sup>th</sup> Street highway/rail at-grade crossing in Hopkinsville, Kentucky.
- d. Hopkins County, the City of Madisonville, the Kentucky Department of Transportation, and other appropriate parties to address traffic delay at the West Noel Avenue highway/rail at-grade crossing in Madisonville, Kentucky.

CSX shall meet as soon as possible after the issuance of this Draft EIS with these agencies and other appropriate parties to negotiate a mutually-acceptable binding agreement on the construction and funding allocation of separated grade crossing(s) at or near these locations, or other traffic delay improvements. SEA encourages the parties to negotiate a mutually-acceptable binding agreement that addresses all relevant matters related to implementing acceptable traffic delay mitigation. If a mutually-acceptable binding agreement has not been reached on the funding allocation of separated grade crossings or other improvements prior to issuing the Final EIS and the communities would like separated grade crossings constructed at these locations, SEA may recommend that the Board, as a condition of the approval of the Application, direct CSX to participate in and assume the cost of binding arbitration to determine the funding allocation for separated grade crossings, or other appropriate mitigation at or near these locations.

- 11. CSX and NS shall consult with appropriate state and local agencies as well as other appropriate parties to address potential traffic delay at the ten highway/rail at-grade crossing locations in the States of Illinois, Indiana, Ohio, and Pennsylvania, where SEA's preliminary determination is that increased train speed may not be feasible to mitigate Acquisition-related traffic delay impacts, and the location does not meet SEA's criteria for a separated grade crossing. These locations are listed in Table 7-7 with the proposed mitigation listed as "Consultation." Specifically, CSX and NS shall meet with these agencies and other appropriate parties as soon as possible to negotiate traditional separated grade crossing agreements or identify other mutually-acceptable approaches to address Acquisition-related traffic delay impacts. If a mutually-acceptable binding agreement has not been reached on the construction and funding of a separated grade crossing or other improvements prior to issuing the Final EIS, SEA may recommend that the Board, as a condition of the approval of the Application, direct CSX and NS to participate in the implementation of appropriate traffic delay mitigation.

The highway/rail at-grade crossings in Erie, Pennsylvania, and those in Lafayette, Indiana, listed in Table 7-7 meet SEA's criteria for mitigation. However, SEA's specific

Recommended Mitigation Nos. 22 and 23, respectively for these communities, are outlined below in the "Proposed Mitigation for Specific Communities with Unique Circumstances" section.

### **Noise**

12. CSX and NS shall consult with affected local communities to address Acquisition-related train engine and wheel noise impacts on six rail line segments in Ohio, and one rail line segment in Michigan listed below and in Table 7-8:
  - a. Berea to Greenwich, Ohio (C-061).
  - b. Deshler to Toledo, Ohio (C-065).
  - c. Mayfield to Marcy, Ohio (C-072).
  - d. Quaker to Mayfield, Ohio (C-073).
  - e. Short to Berea, Ohio (C-074).
  - f. Oak Harbor to Bellevue, Ohio (N-079).
  - g. Carleton to Ecorse, Michigan (S-020).

Specifically, CSX and NS shall meet with the communities along these rail line segments to negotiate a mutually-acceptable binding agreement to implement measures to reduce the effects of engine and wheel noise for sensitive receptors experiencing noise levels above 70 decibels (dBA  $L_{dn}$ ) and with an increase of 5 dBA or more. Appropriate measures could include noise barriers, sound insulation for buildings, or rail lubrication. If a mutually-acceptable binding agreement has not been reached prior to issuing the Final EIS, SEA may recommend that the Board, as a condition of the approval of the Application, direct CSX and NS to implement noise control measures on these rail line segments.

### **Cultural and Historic Resources**

13. NS shall undertake no construction or modification of the Shellpot Bridge near Wilmington, Delaware, until completion of the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f, as amended).
14. CSX shall undertake no construction or modification of a new rail line connection in Exermont, Illinois, until completion of the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f, as amended).

15. NS shall complete cultural and historic resource documentation (Historic American Building Survey/Historic American Engineering Record Level II) for the Toledo Pivot Bridge before initiating any construction or removal activities at that site.
16. CSX shall maintain its interest in and take no steps to alter the historic integrity of the 75<sup>th</sup> Street Interlocking Tower in Chicago, Illinois, until completion of the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f, as amended).
17. CSX shall complete cultural and historic resource documentation (Historic American Building Survey/Historic American Engineering Record) for the Lake Shore & Michigan Southern (New York Central) Shops District at the Collinwood rail yard in Cleveland, Ohio no later than 180 days following the effective date of any Board final written decision in this proceeding.

#### **Natural Resources**

18. Before initiating any construction of the proposed rail line connection in Vermilion, Ohio, NS, in consultation with the U.S. Fish & Wildlife Service and the Ohio Department of Natural Resources, shall conduct a survey to determine the potential presence of the endangered Indiana bat. If this species is found to be present and potentially adversely impacted, NS shall proceed with applicable measures to comply with Section 7 of the Endangered Species Act.

#### **Environmental Justice**

19. CSX and NS shall consult with elected officials, appropriate local agencies, and community representatives to address Acquisition-related environmental impacts in the affected communities that SEA has identified in the States of Illinois, Indiana, Maryland, Ohio, Pennsylvania, and the District of Columbia. Table 7-9 lists these communities and the potential environmental impacts SEA has identified at this time.

SEA's Recommended Mitigation Nos. 1-18, and 28-41 would address potential significant environmental impacts for these communities, which may experience disproportionately high adverse effects as a result of the proposed Conrail Acquisition. Nevertheless, CSX and NS shall meet with these communities to identify and agree on any further appropriate measures to address the specific environmental impacts that may disproportionately impact these communities, or to develop other mitigation measures that might offset these disproportionate impacts. If the parties have not reached a mutually-acceptable binding agreement on the implementation of appropriate mitigation measures to address environmental impacts resulting from the proposed Acquisition prior to issuing the Final EIS, SEA may recommend that the Board, as a condition of the approval of the Application, direct CSX and NS to implement appropriate mitigation measures.

#### **7.2.4 Recommended Mitigation For Specific Communities With Unique Circumstances**

##### **Cleveland - Western Suburbs, Ohio**

20. NS shall continue to consult with local and county government agencies, the Ohio Department of Transportation, elected representatives from the west Cleveland suburbs and the City of Cleveland, and other appropriate parties to address concerns about train traffic increases on the Cleveland to Vermilion rail line segment (Nickel Plate Line). Specifically, NS shall meet with these parties to negotiate a mutually-acceptable binding agreement on the construction and funding allocation of NS's preliminary alternative routing plan to balance train traffic on the Cleveland to Vermilion rail line segment and the Lakeshore Line through Berea, and associated improvements that include new rail line connections, possible grade separations, upgrading warning devices at some highway/rail at-grade crossings, and highway/rail at-grade crossing closures. The preliminary mitigation plan developed by NS was recently submitted to SEA. SEA invites public comments on appropriate alternative mitigation that the Board could require in the event that the parties cannot reach a mutually-acceptable binding agreement prior to issuing the Final EIS.

##### **Cleveland, Ohio**

21. CSX and NS shall jointly and/or separately continue to consult with the City of Cleveland, the City of East Cleveland, the Ohio Department of Transportation, and elected representatives for Cleveland and other appropriate parties to address concerns about train traffic increases on the CSX's Quaker to Mayfield and Mayfield to Marcy rail line segments and NS's Cleveland to White and Cleveland to Ashtabula rail line segments. Specifically, CSX and NS shall meet with these parties to negotiate a mutually-acceptable binding agreement on train routing through Cleveland and mitigation measures for those routes that could experience potential significant environmental impacts. Such an agreement should address all relevant matters related to the implementation of a rerouting plan and/or environmental mitigation measures. SEA invites public comments on appropriate mitigation that the Board could require in the event that the parties cannot reach a mutually-acceptable binding agreement prior to issuing the Final EIS.

##### **Erie, Pennsylvania**

- 22(A). Pursuant to the CSX proposed plan in the Primary Application of June 23, 1997, CSX shall permit NS to operate on the proposed CSX right-of-way (currently owned by Conrail) through Erie, Pennsylvania.
- 22(B). As discussed in the proposed mitigation plan recently provided by NS to SEA, NS shall reroute its train traffic through Erie, Pennsylvania, from the 19<sup>th</sup> Street right-of-way to the CSX right-of-way, which has mostly separated grade crossings.

- 22(C). NS shall not increase train traffic by more than two trains per day on the NS right-of-way through Erie, Pennsylvania, until it completes the necessary agreements and physical improvements to reroute this NS traffic.

Also, CSX and NS shall negotiate a mutually-acceptable binding agreement with appropriate parties that addresses all relevant matters related to the construction and rail operations necessary to accomplish this alternate routing plan. If the parties cannot reach a mutually-acceptable binding agreement on the construction and funding of this plan prior to issuing the Final EIS, SEA may recommend that the Board, as a condition of the approval of the Application, direct CSX and NS to construct and/or operate an alternate route for this area, or to develop other appropriate mitigation. SEA invites public comments on appropriate mitigation in the event an agreement cannot be reached.

### **Lafayette, Indiana**

23. NS shall meet with the City of Lafayette, the Indiana Department of Transportation, and other appropriate parties to develop an interim agreement on a mitigation plan to address potential traffic delay at the ten highway/rail at-grade crossings listed in Table 7-7 until the City of Lafayette's planned comprehensive rail consolidation program can be implemented. This consolidation plan would relocate and consolidate rail lines into a single rail corridor with separated grade crossings. When completed, the consolidation project would eliminate traffic delay and safety issues at these ten highway/rail at-grade crossings. At this time, SEA invites public comments from the State of Indiana, the City of Lafayette, CSX and NS, and other appropriate parties on acceptable interim mitigation measures to address Acquisition-related traffic delay and safety impacts until implementation of the City of Lafayette's planned long-term track relocation project.

### **Chicago, Illinois**

24. As described in CSX's permit applications to the City of Chicago, CSX shall implement the noise, traffic, and community mitigation measures for the proposed intermodal facility at 59<sup>th</sup> Street. CSX recently provided SEA with information on the proposed mitigation plan for this site that includes plans for CSX to construct a noise barrier and implement the community enhancement program described in the CSX permit applications for the 59th Street facility. CSX shall meet with the community to reach a mutually-acceptable binding agreement on the implementation of appropriate mitigation measures prior to issuing the Final EIS. SEA invites public comments on appropriate alternative mitigation that the Board could require in the event the parties cannot reach a mutually-acceptable binding agreement. SEA may recommend that the Board, as a condition of the approval of the Application, direct CSX to implement appropriate mitigation measures for these potential environmental impacts.

**Newark, Delaware**

25. CSX shall consult with local agencies, the University of Delaware, the Delaware Department of Transportation, and other appropriate parties to address potential safety concerns at the highway/rail at-grade crossings in Newark, Delaware. Specifically, CSX shall meet with these parties to negotiate a mutually-acceptable binding agreement on the implementation and funding allocation for measures to address safety concerns at these highway/rail at-grade crossings. Appropriate measures could include four-quadrant gates, pedestrian gates, pedestrian overpasses or underpasses, safety education, or other measures to address pedestrian safety. SEA invites public comments on appropriate mitigation that the Board could require in the event that a mutually-acceptable binding agreement cannot be reached prior to issuing the Final EIS.

**Muncie, Indiana**

26. NS shall consult with the City of Muncie, the Indiana Department of Transportation, and other appropriate parties to address potential safety and traffic concerns at seven highway/rail at-grade crossings on the Alexandria to Muncie rail line segment (Kilgore, Nichols, Goodman, Hutchinson, Jackson, Celia, and Manning). NS recently provided SEA with a proposed plan to mitigate the potential environmental impacts that includes a plan to upgrade highway/rail at-grade crossing warning devices and to use current train traffic holding practices to avoid blocking highway/rail at-grade crossings. Specifically, NS shall meet with these parties to negotiate a mutually-acceptable binding agreement on the implementation of and funding allocation for measures to address safety and traffic concerns at these highway/rail at-grade crossings. SEA invites public comments on appropriate mitigation that the Board could require in the event a mutually-acceptable binding agreement cannot be reached prior to issuing the Final EIS.

**East Chicago, Hammond, Gary, and Whiting, Indiana (Four City Consortium)**

27. CSX and NS shall consult with representatives of the Four City Consortium, the Indiana Department of Transportation, and other appropriate parties to address potential traffic delay and safety concerns at the nine highway/rail at-grade crossings in these communities. Specifically, CSX and NS shall meet with these parties to negotiate a mutually-acceptable binding agreement on the implementation and funding allocation for measures to address traffic delay and safety concerns at these highway/rail at-grade crossings. SEA invites public comments on appropriate mitigation that the Board could require in the event that a mutually-acceptable binding agreement cannot be reached prior to issuing the Final EIS.

### **7.2.5 Recommended General Mitigation For Proposed Constructions and Abandonments**

The following preliminary mitigation measures apply to all proposed construction and abandonment activities as appropriate in order to reduce or avoid potential environmental impacts.

28. CSX and NS shall observe all applicable Federal, state, and local regulations regarding handling and disposal of any waste materials, including hazardous waste, encountered or generated during proposed construction or abandonment-related activities. In the case of a spill, CSX and NS shall implement appropriate emergency response procedures and remediation measures.
29. CSX and NS shall transport all hazardous materials generated by any construction or abandonment-related activities in compliance with the U.S. Department of Transportation Hazardous Materials Regulations (49 CFR Parts 171 to 179).
30. CSX and NS shall dispose of all materials that cannot be reused in accordance with state and local solid waste management regulations.
31. CSX and NS shall restore any adjacent properties that are disturbed during right-of-way construction or abandonment-related activities to pre-construction or pre-abandonment conditions.
32. CSX and NS shall use Best Management Practices to encourage regrowth in disturbed areas and to stabilize disturbed soils.
33. CSX and NS shall use appropriate signs and barricades to control traffic disruptions during construction and abandonment-related activities at or near any grade crossings.
34. CSX and NS shall restore roads disturbed during construction or abandonment-related activities to conditions as required by state and local jurisdictions.
35. CSX and NS shall comply with all applicable Federal, state, and local regulations to control and minimize fugitive dust emissions created during construction or abandonment-related activities through the use of such control methods as water spraying, installation of wind barriers, and chemical treatment.
36. CSX and NS shall control temporary noise from construction or abandonment-related equipment through the use of work-hour controls and maintenance of muffler systems on machinery.
37. If previously unknown archaeological remains are found during construction or abandonment-related activities, CSX and NS shall cease work in the area, and

immediately contact and coordinate activities with the appropriate State Historic Preservation Office.

38. CSX and NS shall use appropriate technologies and Best Management Practices, such as silt screens and straw bale dikes, to minimize soil erosion, sedimentation, runoff, and surface instability during construction or abandonment-related activities. CSX and NS shall disturb the smallest area possible around any streams and tributaries and shall revegetate disturbed areas immediately following construction or abandonment-related activities.
39. CSX and NS shall assure that all culverts are clear from debris to avoid potential flooding and stream flow alteration, in accordance with Federal, state, and local regulations.
40. CSX and NS shall obtain all necessary Federal, state and local permits for alteration of wetlands, ponds, lakes, streams or rivers, or if construction of abandonment-related activities would cause soil or other materials to wash into these water resources. Also, CSX and NS shall use appropriate techniques to minimize impacts to water bodies wetlands, and navigation.
41. CSX and NS shall obtain all necessary Federal, state and local permits for storm water discharge, including National Pollution Discharge Elimination System (NPDES) permits, during construction or abandonment-related activities.

#### **7.2.6 Recommended Mitigation For Proposed Constructions and Abandonments at Specific Locations**

##### **Vermilion, Ohio**

42. NS shall consult with appropriate local authorities and fully fund the cost of raising the elevation of Coen Road to minimize the adverse safety impacts that would be caused by the proposed construction of the Vermilion connection near the Village of Vermilion in Erie County, Ohio. If the proposed connection is constructed, the roadway should be elevated to create a level highway/rail crossing.

##### **Oak Harbor, Ohio**

- 43(A). NS shall consult with appropriate local authorities and fully fund the cost of raising the elevation of Toussaint-Portage Road to minimize the adverse safety impacts that would be caused by the proposed construction of the Oak Harbor rail line connection near the Village of Oak Harbor in Ottawa County, Ohio. If the proposed rail line connection is constructed, the roadway should be elevated to create level highway/rail crossings.

- 43(B). NS shall install a two-quadrant gate at their existing highway/rail at-grade crossing at Toussaint-Portage Road.

**Tolono, Illinois: Tolono Construction**

44. NS shall not disturb Daggy Street or the residential properties at this location during the construction at the Tolono Connection.

**Paris to Danville Rail Line Segment, Illinois**

45. CSX shall retain its interest in and take no steps to alter the historic integrity of the proposed abandonment of the rail line segment until completion of the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f, as amended) has been completed. In the event that potentially significant archaeological resources are discovered during the course of salvage activities, CSX shall cease work in the area and immediately contact and coordinate activities with the Illinois SHPO.

**South Bend-Dillon Junction Rail Line Segment, Indiana**

46. NS shall retain its interest in and take no steps to alter the historic integrity of the two bridges located at milepost SK 12.08 and SK 17.73 or archaeological site 12SJ8 until the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f, as amended) has been completed. In the event that potentially significant archaeological resources are discovered during salvage activities, NS shall cease work in the area, and immediately contact and coordinate activities with the Indiana SHPO.

**Seven Separate Connections <sup>5</sup>**

SEA recommends the following mitigation measures to address rail operations over these seven separate rail line connections:

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<sup>5</sup> Potential environmental impacts of the physical construction of the Seven Separate Connections at issue in STB Finance Docket No. 33388 (Sub Nos. 1-7) were covered in separate Environmental Assessments that were prepared by SEA prior to and separate from this Draft EIS. By a decision issued November 25, 1997, the Board approved, subject to certain environmental conditions, the physical construction of the seven connections totaling approximately four miles in the States of Indiana and Ohio. Proposed mitigation for the operational impacts associated with these projects is covered in Recommended Mitigation Nos. 47-49. Therefore, this Draft EIS only addresses proposed operations over these connections. For more details see Decision No. 9 and Decision (in Sub Nos. 1-7) dated November 25, 1997, included in Appendix T.

**Crestline, Ohio (Sub No. 1); Willow Creek, Indiana (Sub No. 2); Greenwich, Ohio (Sub No. 3); Sidney, Ohio (Sub No. 4); Sidney, Illinois (Sub No. 5); Alexandria, Indiana (Sub No. 6); and Eucyrus, Ohio (Sub No. 7)**

- 47. CSX and NS shall provide, upon request, local emergency management organizations with copies of all applicable Emergency Response Plans and participate in the training of local emergency staff (upon request) for coordinated responses to potential incidents.
- 48. CSX and NS shall use only Environmental Protection Agency-approved herbicides and qualified contractors for application of right-of-way maintenance herbicides, and shall limit such applications to the extent necessary for rail operations.

**Willow Creek, Indiana (Sub No. 2) and Greenwich, Ohio (Sub No. 3)**

- 49. If wheel squeal occurs during rail operations over these connections, CSX shall use appropriate rail lubrication to minimize noise levels.

**Table 7-2  
Preliminary Rail Line Segments That May Warrant Freight Safety Mitigation**

State	Site ID	Proposed Owner	Description	Counties
IN	N-042	NS	CP 501 to Indiana Harbor, IN	Lake
OH	C-061	CSX	Berea to Greenwich, OH	Cuyahoga, Lorain, and Huron
	C-068	CSX	Greenwich to Willard, OH	Huron
	C-075	CSX	Willard to Fostoria, OH	Huron, Seneca
	N-077	NS	Oak Harbor to Miami, OH	Ottawa, Wood, and Lucas
	N-086	NS	Miami to Airline, OH	Lucas
PA	N-090	NS	Rutherford to Harrisburg, PA	Dauphin

**Table 7-3  
Preliminary Rail Line Segments That May Warrant Passenger Safety Mitigation**

State	Site ID	Proposed Owner	Description	Passenger Service
DC MD	C-003	CSX	Washington, D.C. to Pt of Rocks, MD	MARC Antrak
GA	C-346	CSX	Savannah to Jesup, GA	Amtrak
MI	N-120	NS	Jackson to Kalamazoo, MI	Amtrak
	N-121	NS	West Detroit to Jackson, MI	Amtrak
MI IN	N-497	Amtrak	Kalamazoo, MI to Porter, IN	Amtrak
NY	N-063	NS	Campbell Hall to Port Jervis, NY	NJ Transit Metro North Commuter Rail
NC	C-334	CSX	Weldon to Rocky Mount, NC	Amtrak
VA	C-101	CSX	Fredericksburg to Potomac Yard, VA	Amtrak VRE
VA NC	C-103	CSX	S. Richmond, VA to Weldon, NC	Amtrak

**Table 7-4  
Preliminary Recommended Highway/Rail  
At-Grade Crossings That May Warrant Safety Improvements**

State	FRA ID	Railroad Segment	Crossing Name, County, and City	Current Warning Device	Recommended Mitigation
IL	479848P	N-045	Campbell Crossing TR 450, Vermilion, Danville	Passive	Flashing Lights
IN	478188C	N-041	Notestine F l., Allen, Graybill	Passive	Flashing Lights
	478216D	N-041	Estella Ave., Allen, Ft. Wayne	Flashing Lights	Gates
	478226J	N-041	Anthony Blvd., Allen, Ft. Wayne	Gates	4-Quadrant Gates or Median Barriers
	478240E	N-044	Engle Rd., Allen, Ft. Wayne	Flashing Lights	Gates
	484246J	N-046	Washington St./CR 100 E., Carroll, Lockport	Passive	Flashing Lights

**Table 7-4**  
**Preliminary Recommended Highway/Rail**  
**At-Grade Crossings That May Warrant Safety Improvements**

State	FRA ID	Railroad Segment	Crossing Name, County, and City	Current Warning Device	Recommended Mitigation
	484248X	N-046	Meridian Line, Carroll, Lockport	Passive	Flashing Lights
	484216S	N-046	Cedar St., Cass, Logansport	Passive	Flashing Lights
	484229T	N-046	18 <sup>th</sup> St., Cass, Logansport	Flashing Lights	Gates
	155419P	C-066	CR 9, Elkhart, Elkhart	Passive	Flashing Lights
	342470C	C-025	CR 100 N., Gibson, Princeton	Passive	Flashing Lights
	342473X	C-025	Spring St., Gibson, Princeton	Passive	Flashing Lights
	342481P	C-025	Mulberry St., Gibson, Princeton	Passive	Flashing Lights
	342493J	C-025	W. John St., Gibson, Princeton	Passive	Flashing Lights
	478270W	N-044	Briant St., Huntington, Huntington	Flashing Lights	Gates
	342413N	C-025	Hart St., Knox, Vincennes	Flashing Lights	Gates
	342416J	C-025	Perry St., Knox, Vincennes	Passive	Flashing Lights
	342417R	C-025	Buntin St., Knox, Vincennes	Passive	Flashing Lights
	342425H	C-025	S. 15 <sup>th</sup> St., Knox, Vincennes	Flashing Lights	Gates
	155391B	C-066	Seventh St., Kosciusko, Warsaw	Flashing Lights	Gates
	155392H	C-066	Huntington St., Kosciusko, Warsaw	Gates	4-Quadrant Gates or Median Barriers
	155394W	C-066	Main/Syr-Web, Kosciusko Warsaw	Flashing Lights	Gates
	155395D	C-066	Oak St., Kosciusko, Warsaw	Passive	Flashing Lights
	155484V	C-066	CR 875 E, La Porte, Portage	Passive	Flashing Lights
	155496P	C-066	500W, La Porte, Portage	Passive	Flashing Lights

**Table 7-4  
Preliminary Recommended Highway/Rail  
At-Grade Crossings That May Warrant Safety Improvements**

State	FRA ID	Railroad Segment	Crossing Name, County, and City	Current Warning Device	Recommended Mitigation
	155632M	C-027	Countyline Rd., Lake, Gary	Flashing Lights	Gates
	155633U	C-027	Hobart Rd., Lake, Gary	Flashing Lights	Gates
	155637W	C-027	Lake St., Lake, Gary	Gates	4-Quadrant Gates or Median Barriers
	155645N	C-027	Clarke Rd., Lake, Gary	Flashing Lights	Gates
	474598M	N-040	CR 100 E., Madison, Anderson	Passive	Flashing Lights
	155465R	C-066	First Rd.-Smith, Marshall, Plymouth	Passive	Flashing Lights
	155476D	C-066	Thorn Rd., Marshall, Plymouth	Passive	Flashing Lights
	484209G	N-046	CR 250 W., Miami, Peru	Passive	Flashing Lights
	155372W	C-066	CR 500 W., Noble, Kendallville	Passive	Flashing Lights
	155380N	C-066	900 W., Noble, Kendallville	Passive	Flashing Lights
	155615W	C-066	CR 900 North, Porter, Between Chestertown and Valparaiso	Gates	4-Quadrant Gates or Median Barriers
	484302N	N-045	8 <sup>th</sup> St., Tippecanoe, Lafayette	Passive	Complete Lafayette Bypass <sup>a</sup>
	484303V	N-045	7 <sup>th</sup> St., Tippecanoe, Lafayette	Flashing Lights	Complete Lafayette Bypass <sup>a</sup>
	484306R	N-045	Romig St., Tippecanoe, Lafayette	Flashing Lights	Complete Lafayette Bypass <sup>a</sup>

**Table 7-4**  
**Preliminary Recommended Highway/Rail**  
**At-Grade Crossings That May Warrant Safety Improvements**

State	FRA ID	Railroad Segment	Crossing Name, County, and City	Current Warning Device	Recommended Mitigation
	484308E	N-045	5 <sup>th</sup> St., Tippecanoe, Lafayette	Passive	Complete Lafayette Bypass <sup>a</sup>
	484309L	N-045	4 <sup>th</sup> Street/US 231, Tippecanoe, Lafayette	Gates	Complete Lafayette Bypass <sup>a</sup>
	484311M	N-045	Smith St., Tippecanoe, Lafayette	Flashing Lights	Complete Lafayette Bypass
	484323G	N-045	CR 172, Tippecanoe, Lafayette	Passive	Flashing Lights
	484267C	N-046	CR 900 N., Tippecanoe, Lafayette	Passive	Flashing Lights
	484269R	N-046	CR 700 N., Tippecanoe, Lafayette	Passive	Flashing Lights
	484282E	N-046	CR 500 E., Tippecanoe, Lafayette	Passive	Flashing Lights
	484291D	N-046	Greenbush St., Tippecanoe, Lafayette	Flashing Lights	Complete Lafayette Bypass <sup>a</sup>
	484292K	N-046	18 <sup>th</sup> St., Tippecanoe, Lafayette	Flashing Lights	Complete Lafayette Bypass <sup>a</sup>
	484293S	N-046	17 <sup>th</sup> & Salem Tippecanoe, Lafayette	Flashing Lights	Complete Lafayette Bypass <sup>a</sup>
	484294Y	N-046	Union St., Tippecanoe, Lafayette	Gates	Complete Lafayette Bypass <sup>a</sup>
	342829D	C-025	Stacer Rd., Vanderburgh, Stacer	Passive	Flashing Lights
	342850J	C-025	Ohio St., Vanderburgh, Evansville	Flashing Lights	Gates

**Table 7-4  
Preliminary Recommended Highway/Rail  
At-Grade Crossings That May Warrant Safety Improvements**

State	FRA ID	Railroad Segment	Crossing Name, County, and City	Current Warning Device	Recommended Mitigation
	478313M	N-044	Olive St., Wabash, Wabash	Passive	Flashing Lights
	478314U	N-044	Wolf Rd., Wabash, Wabash	Flashing Lights	Gates
KY	345246C	C-021	Duffey St., Christian, Hopkinsville	Passive	Flashing Lights
	345269J	C-021	E. 6 <sup>th</sup> St., Christian, Hopkinsville	Passive	Flashing Lights
	345318D	C-021	W. Moss Ave., Hopkins, Masisonville	Passive	Flashing Lights
	155645N	C-021	W. Center St., Hopkins, Madisonville	Flashing Lights	Gates
	345331S	C-021	West Noel Ave., Hopkins, Madisonville	Flashing Lights	Grade Separation*
	345362R	C-021	W. Dixon St., Webster, Sebree	Flashing Lights	Gates
MD	469321F	N-091	Lappans Rd., Washington, St. James	Flashing Lights	Gates
	534883D	N-091	Reiff Church Rd., Washington, Mauginsville	Passive	Flashing Lights
	534887F	N-091	Shawley Dr., Washington, Mauginsville	Passive	Flashing Lights
MI	511027V	S-020	Pennsylvania Rd., Wayne, Taylor	Flashing Lights	Gates
NY	471825F	N-070	Loomis St., Chautauqua, Ripley	Passive	Flashing Lights
OH	532688W	C-062	Lafayette Rd., Allen,	Passive	Flashing Lights
	472012W	N-075	Walter Main Rd., Ashtabula, Geneva	Passive	Flashing Lights
	502682Y	C-064	Biddle Rd., Crawford, Galion	Passive	Flashing Lights
	481584W	N-071	Chatfield, Crawford, Chatfield	Passive	Flashing Lights

**Table 7-4**  
**Preliminary Recommended Highway/Rail**  
**At-Grade Crossings That May Warrant Safety Improvements**

State	FRA ID	Railroad Segment	Crossing Name, County, and City	Current Warning Device	Recommended Mitigation
	142366F	C-066	Jackson St., Defiance, Defiance	Flashing Lights	Gates
	481490V	N-073	Berlin Station Rd., Delaware, Delaware	Passive	Flashing Lights
	481660M	N-085	Skadden/CR 42, Erie,	Passive	Flashing Lights
	518382H	C-071	Marsh Rd., Hardin	Passive	Flashing Lights
	155755Y	C-066	Main St., Henry, Deshler	Flashing Lights	Gates
	155760V	C-065	North St., Henry, Deshler	Passive	Flashing Lights
	518507F	C-061	Pitts Rd., Lorain, Wellington	Passive	Flashing Lights
	472284J	N-080	Kansas Ave., Lorain, Lorain	Gates	4-Quadrant Gates or Median Barriers
	232122V	C-040	Conneau (State Line Rd.), Lucas, Alexis	Gates	4-Quadrant Gates or Median Barriers
	518391G	C-071	Section St., Marion, La Rue	Gates	4-Quadrant Gates or Median Barriers
	481546M	N-073	Galion-Marseilles, Marion, Marion	Passive	Flashing Lights
	481547U	N-073	Scott TWP Rd.-190, Marion, Marion	Passive	Flashing Lights
	518456X	C-067	Main St., Richland, Shelby	Flashing Lights	Gates
	518476J	C-067	Base Line Rd., Richland, Shelby	Passive	Flashing Lights
	473668W	N-079	Kilbourne, Sandusky Bellevue	Gates	4-Quadrant Gates or Median Barriers
	473673T	N-079	CR 292, Sandusky, Bellevue	Passive	Flashing Lights

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**Table 7-4  
Preliminary Recommended Highway/Rail  
At-Grade Crossings That May Warrant Safety Improvements**

State	FRA ID	Railroad Segment	Crossing Name, County, and City	Current Warning Device	Recommended Mitigation
	473680D	N-079	CR 175, Sandusky, Bellevue	Gates	4-Quadrant Gates or Median Barriers
	473726P	N-079	Unknown, Sandusky, Kingsway	Passive	Flashing Lights
	228774H	C-070	Main St., Seneca, Fostoria	Passive	Flashing Lights
	228780L	C-070	TWP 0180, Seneca, Fostoria	Passive	Flashing Lights
	142178R	C-075	Gillick Rd., Seneca, Tiffin	Passive	Flashing Lights
	142179X	C-075	Morrison Rd., Seneca, Tiffin	Passive	Flashing Lights
	503133H	N-082	Bradley-Brownlee, Trumbull, Farber	Gates	4-Quadrant Gates or Median Barriers
	544729H	N-082	Warren Sharon Rd., Trumbull, Brookfield	Flashing Lights	Gates
	155789T	C-065	Range Line Rd., Wood, Bowling Green	Passive	Flashing Lights
	155794T	C-065	Kellogg Rd., Wood, Bowling Green	Passive	Flashing Lights
	155798S	C-065	Washington St., Wood, Tontogany	Passive	Flashing Lights
	155799Y	C-065	Tontogony Rd., Wood Tontogony	Passive	Flashing Lights
	155804T	C-065	Middletown Pike, Wood, Haskins	Passive	Flashing Lights
	155812K	C-065	Fire Point Rd., Wood, Perrysburg	Passive	Flashing Lights
	155814Y	C-065	Roachtion Rd., Wood, Perrysburg	Passive	Flashing Lights
	155818B	C-065	Eckel Jct. Rd., Wood, Perrysburg	Passive	Flashing Lights
	155819H	C-065	Eckel Rd., Wood, Perrysburg	Passive	Flashing Lights
	155820C	C-065	Eckel Rd., Wood, Perrysburg	Passive	Flashing Lights

**Table 7-4**  
**Preliminary Recommended Highway/Rail**  
**At-Grade Crossings That May Warrant Safety Improvements**

State	FRA ID	Railroad Segment	Crossing Name, County, and City	Current Warning Device	Recommended Mitigation
	155821J	C-065	W. Boundary St., Wood, Perrysburg	Gates	4-Quadrant Gates or Median Barriers
	155838M	C-065	Ford Rd., Wood, Rossford	Passive	Flashing Lights
	155839U	C-065	Bates Rd., Wood, Rossford	Passive	Flashing Lights
	155840N	C-065	Schrick Rd., Wood, Rossford	Passive	Flashing Lights
PA	592290T	N-091	York Rd., Cumberland, Mechanicsburg	Gates	4-Quadrant Gates or Median Barriers
	592295C	N-091	Criswall, Cumberland, Mechanicsburg	Passive	Flashing Lights
	592320H	N-091	Mill, Cumberland, Mechanicsburg	Passive	Flashing Lights
	471901W	N-070	Peach St., Erie, Erie	Gates	Relocate to CSX corridor <sup>a</sup>
	471906F	N-070	Cherry St., Erie, Erie	Flashing Lights	Relocate to CSX corridor <sup>a</sup>
	471911C	N-070	Raspberry St., Erie, Erie	Flashing Lights	Relocate to CSX corridor <sup>a</sup>
	471940M	N-070	Lucas Rd., Erie, Erie	Passive	Flashing Lights
	535146X	N-091	Guilford Springs Rd., Franklin,	Passive	Flashing Lights
	535163N	N-091	Hayes Rd., Franklin	Passive	Flashing Lights
VA	468599F	N-091	SR 7, Clarke, Berryville	Gates	4-Quadrant Gates or Median Barriers
	468634S	N-091	Rockland Rd., Warren, Winchester	Flashing Lights	Gates

<sup>a</sup> Recommendation from highway/rail at-grade crossing delay analysis.

**Table 7-5  
Preliminary Rail Line Segments That May Warrant Key Route Mitigation**

State	Site ID	Proposed Owner	Segment	County
<b>Parkwood, Alabama — Thomasville, Georgia</b>				
AL	C-270	CSX	Parkwood to Montgomery, AL	AL: Montgomery, Elmore, Autauga, Chilton, and Shelby
AL GA	C-380	CSX	Montgomery, AL to Thomasville, GA	GA: Thomas, Grady, Decatur, Seminole, and Early  AL: Houston, Dale, Pike, and Montgomery
<b>Parkwood, Alabama — Manchester, Georgia</b>				
AL GA	C-376	CSX	Parkwood, AL to Lagrange, GA	AL: Jefferson, Shelby, Talladega, Clay, Randolph, and Chambers  GA: Troup
GA	C-377	CSX	Lagrange to Manchester, GA	GA: Troup and Meriwether
<b>Atlanta, Georgia — Flomaton, Alabama</b>				
GA	C-355	CSX	Atlanta to Lagrange, GA	GA: Fulton, Coweta, and Troup
AL GA	C-356	CSX	Lagrange, GA to Montgomery, AL	AL: Chambers, Lee, Macon, and Montgomery  GA: Troup
AL	C-271	CSX	Montgomery to Flomaton, AL	AL: Montgomery, Lowndes, Butler, Conecuh, and Escambia
FL	C-403	CSX	Winston to Plant City, FL	FL: Hillsborough
GA	C-347	CSX	Jesup to Waycross, GA	GA: Ware, Pierce, and Wayne
IN	C-693	CSX	Willow Creek to Ivanhoe, IN	IN: Porter and Lake
IN	N-041	NS	Butler to Fort Wayne, IN	IN: De Kalb and Allen
<b>Latonia, Kentucky — Cartersville, Georgia</b>				
KY	C-292	CSX	Latonia to Winchester, KY	KY: Clark, Bourbon, Harrison, Pendleton, and Kenton
KY	C-293	CSX	Winchester to Sinks, KY	KY: Clark, Madison, and Rockcastle
KY	C-294	CSX	Sinks to Corbin, KY	KY: Laurel and Whitley

**Table 7-5  
Preliminary Rail Line Segments That May Warrant Key Route Mitigation**

State	Site ID	Proposed Owner	Segment	County
KY TN GA	C-295	CSX	Corbin, KY to Cartersville, GA	KY: Whitley  TN: Campbell Anderson, Knox, Blount, Monroe, McMinn, and Polk  GA: Murray, Gordon, and Bartow
KY	C-617	CSX	N Hazard to Duane, KY	KY: Perry and Knott
MD DC	C-031	CSX	Alexandria Jct, MD to Washington, DC	MD: Prince George's DC: Washington, DC
MI	C-214	CSX	Detroit to Plymouth, MI	MI: Wayne
MO	N-478	NS	Moberly to CA Junction, MO	MO: Randolph, Charlton, Carroll, and Ray
<b>Salisbury, North Carolina — New Line, Tennessee</b>				
NC	N-360	NS	Salisbury to Asheville, NC	NC: Rowan, Iredell, Catawba, Burke, McDowell, and Buncombe
NC TN	N-361	NS	Asheville, NC to Leadvale, TN	NC: Buncombe and Madison  TN: Cocke
TN	N-392	NS	Leadvale to New Line, TN	TN: Cocke and Jefferson
<b>Hamlet, North Carolina — Fairfax, South Carolina</b>				
NC SC	C-357	CSX	Hamlet, NC to Mcbee, SC	NC: Richmond  SC: Marlboro and Chesterfield
SC	C-358	CSX	Mcbee to Columbia, SC	SC: Chesterfield, Kershaw, and Richland
SC	C-359	CSX	Columbia to Fairfax, SC	SC: Lexington, Orangeburg, Bamberg, and Allendale
NC SC	C-339	CSX	Pembroke, NC to Dillon, SC	NC: Robeson  SC: Dillon
NJ	C-769	CSX	Trenton to Port Reading, NJ	NJ: Somerset, Mercer
NJ	S-211	Shared	Nave to N Bergen, NJ	NJ: Hudson

**Table 7-5  
Preliminary Rail Line Segments That May Warrant Key Route Mitigation**

State	Site ID	Proposed Owner	Segment	County
NY	C-052	CSX	CP Sycamore to Black Rock, NY	NY: Erie
NY	N-061	NS	Ebenezer Jct to Buffalo, NY	NY: Erie
<b>Suffern — Buffalo, New York</b>				
NY	N-062	NS	Suffern to Campbell Hall, NY	NJ: Bergen
NY	N-063	NS	Campbell Hall to Port Jervis, NY	NY: Orange
NY	N-245	NS	Port Jervis to Binghamton, NY	NY: Orange, Broome, Delaware, and Sullivan
NY	N-246	NS	Binghamton to Waverly, NY	NY: Broome and Tioga
NY	N-247	NS	Waverly to Corning, NY	NY: Tioga, Chemung, and Stuben
NY	N-065	NS	Corning to Buffalo, NY	NY: Stuben, Livingston, Wyoming, and Erie
<b>Buffalo, New York — Bellevue, Ohio</b>				
NY PA OH	N-070	NS	Buffalo, NY to Ashtabula, OH	NY: Erie and Chautauqua PA: Erie OH: Ashtabula
OH	N-075	NS	Ashtabula to Cleveland, OH	OH: Ashtabula, Lake, and Cuyahoga
OH	N-080	NS	Cleveland to Vermilion, OH	OH: Cuyahoga, Lorain, and Erie
OH	N-072	NS	Vermilion to Bellevue, OH	OH: Erie, Huron, and Sandusky
OH	N-079	NS	Bellevue to Oak Harbor, OH	OH: Sandusky and Ottawa
<b>Quaker — Berea, Ohio</b>				
OH	C-073	CSX	Quaker to Mayfield, OH	OH: Cuyahoga
OH	C-072	CSX	Mayfield to Marcy, OH	OH: Cuyahoga
OH	C-069	CSX	Marcy to Short, OH	OH: Cuyahoga
OH	C-074	CSX	Short to Berea, OH	OH: Cuyahoga

**Table 7-5  
Preliminary Rail Line Segments That May Warrant Key Route Mitigation**

State	Site ID	Proposed Owner	Segment	County
<b>Columbus -- Toledo, Ohio</b>				
OH	C-229	CSX	Columbus to Marion, OH	OH: Franklin, Delaware, and Marion
OH	C-070	CSX	Marion to Fostoria, OH	OH: Marion, Wyandot, and Seneca
OH	C-228	CSX	Fostoria to Toledo, OH	OH: Seneca and Wood
OH	C-695	CSX	CP Maumee to Oak, OH	OH: Wood and Lucas
<b>Ashtabula, Ohio — Rochester, Pennsylvania</b>				
OH	N-082	NS	Ashtabula to Youngstown, OH	OH: Trumbull, and Ashtabula
OH PA	N-095	NS	Youngstown, OH to Rochester, PA	OH: Mahoning PA: Beaver and Lawrence
OH PA	C-081	CSX	Youngstown, OH to New Castle, PA	OH: Mahoning PA: Lawrence
PA	C-766	CSX	West Falls to CP Newtown Jct, PA	PA: Philadelphia
PA	N-203	NS	Bethlehem to Allentown, PA	PA: Northhampton
PA	N-216	NS	Reading to Reading Belt Jct, PA	PA: Berks
<b>Park Junction, Pennsylvania — Camden, New Jersey</b>				
PA	S-232	Shared	Park Junction to Phila Frankford Jct., PA	PA: Philadelphia
PA NJ	S-233	Shared	Phila Frankford Jct., PA to Camden, NJ	PA: Philadelphia NJ: Camden
SC	C-341	CSX	Florence to Lane, SC	SC: Florence and Williamsburg
<b>St. Stephens, South Carolina — Savannah, Georgia</b>				
SC	C-343	CSX	St. Stephens to Ashley Junction, SC	SC: Berkeley
SC	C-344	CSX	Ashley Junction to Yemassee, SC	SC: Berkeley, Charleston, and Colleton

**Table 7-5**  
**Preliminary Rail Line Segments That May Warrant Key Route Mitigation**

State	Site ID	Proposed Owner	Segment	County
SC GA	C-345	CSX	Yemassee, SC to Savannah, GA	SC: Colleton, Hampton and Jasper GA: Chatham
TN	N-399	NS	Bulls Gap to Frisco, TN	TN: Hamblen and Hawkins VA: Scott
TN	N-406	NS	Frisco to Kingsport, TN	TN: Sullivan
VA	N-315	NS	Alexandria to Manassas, VA	VA: Fairfax, Prince, and William
VA	N-432	NS	Poe ML to Petersburg, VA	VA: Petersburg City

**Table 7-6**  
**Preliminary Rail Line Segments That May Warrant  
 Emergency Response (Major Key Route) Mitigation**

State	Site ID	Proposed Owner	Segment	County
<b>Decatur, Alabama — New Orleans, Louisiana</b>				
AL	C-267	CSX	Decatur to Black Creek, AL	AL: Morgan, Cullman, Blount, and Jefferson
AL	C-268	CSX	Black Creek to Birmingham, AL	AL: Jefferson
AL	C-269	CSX	Birmingham to Parkwood, AL	AL: Jefferson and Shelby
AL	C-270	CSX	Parkwood to Montgomery, AL	AL: Shelby, Chilton, Autauga, Elmore, and Montgomery
AL	C-271	CSX	Montgomery to Flomaton, AL	AL: Montgomery, Lowndes, Butler, Conecuh, and Escambia
AL	C-386	CSX	Flomaton to Mobile, AL	AL: Escambia, Baldwin, and Mobile

**Table 7-6  
Preliminary Rail Line Segments That May Warrant  
Emergency Response (Major Key Route) Mitigation**

State	Site ID	Proposed Owner	Segment	County
AL MS LA	C-387	CSX	Mobile, AL to New Orleans, LA	AL: Mobile MS: Jackson, Harrison and Hancock LA: Orleans and St. Bernard
GA	C-298	CSX	Manchester to Waycross, GA	GA: Meriwether, Talbot, Taylor, Macon, Dooley, Crisp, Wilcox, Turner, Ben Hill, Irwin, Coffee, Bacon, and Ware
<b>Hamlet, North Carolina — Montgomery, Alabama</b>				
NC	C-350	CSX	Hamlet to Monroe, NC	NC: Richmond, Anson, and Union
NC SC	C-351	CSX	Monroe, NC to Clinton, SC	NC: Union SC: Lancaster, Chester, Union, Newberry, and Laurens
SC	C-352	CSX	Clinton to Greenwood, SC	SC: Laurens and Greenwood
SC GA	C-353	CSX	Greenwood, SC to Athens, GA	SC: Greenwood and Abbeville GA: Elbert, Madison, and Clarke
GA	C-354	CSX	Athens to Atlanta, GA	GA: Clarke, Barrow, Gwinnett, De Kalb, and Fulton
GA	C-355	CSX	Atlanta to Lagrange, GA	GA: Fulton, Coweta, and Troup
GA AL	C-356	CSX	Lagrange, GA to Montgomery, AL	GA: Troup AL: Chambers, Lee, Macon, and Montgomery
GA AL	C-376	CSX	Lagrange, GA to Parkwood, AL	AL: Jefferson, Shelby, Talladega, Clay, Randolph, and Chambers GA: Troup
IN	C-025	CSX	Vincennes to Evansville, IN	IN: Knox, Gibson, and Vanderburgh

**Table 7-6  
Preliminary Rail Line Segments That May Warrant  
Emergency Response (Major Key Route) Mitigation**

State	Site ID	Proposed Owner	Segment	County
<b>Butler, Indiana -- Tilton, Illinois</b>				
IN	N-041	NS	Butler to Fort Wayne, IN	IN: DeKalb and Allen
IN	N-044	NS	Fort Wayne to Peru, IN	IN: Miami, Wabash, Huntington, and Allen
IN	N-046	NS	Peru to Lafayette Junction, IN	IN: Tippecanoe, Carroll, Cass, and Miami
IN IL	N-045	NS	Lafayette Junction, IN to Tilton, IL	IN: Warren, Fountain, and Tippecanoe IL: Vermilion
<b>Covington, Kentucky -- Amqui, Tennessee</b>				
KY	C-291	CSX	Covington to Latonia, KY	KY: Kenton
KY	C-287	CSX	Latonia to Anchorage, KY	KY: Kenton, Grant, Owen, Carroll, Henry, Oldham, and Jefferson
KY	C-288	CSX	Anchorage to Louisville, KY	KY: Jefferson
KY TN	C-289	CSX	Louisville, KY to Amqui, TN	KY: Jefferson, Bullitt, Hardin, Hart, Barren, Edmonson, Warren, and Simpson TN: Sumner and Davidson
<b>Relay -- Alexandria Junction, Maryland</b>				
MD	C-037	CSX	Relay to Jessup, MD	MD: Anne Arundel
MD	C-034	CSX	Jessup to Alexandria Junction, MD	MD: Anne Arundel and Prince George's
MI OH	C-040	CSX	Carleton, MI to Toledo, OH	MI: Monroe OH: Lucas
OH	C-065	CSX	Toledo to Deshler, OH	OH: Lucas, Wood, and Henry

**Table 7-6  
Preliminary Rail Line Segments That May Warrant  
Emergency Response (Major Key Route) Mitigation**

State	Site ID	Proposed Owner	Segment	County
OH IN	C-066	CSX	Deshler, OH to Willow Creek, IN	OH: Henry and Defiance IN: Dekalb, Noble, Kosciusko, Elkhart, Marshall, St. Joseph, LaPorte, Porter, and Lake
IN	C-027	CSX	Willow Creek to Pine Junction, IN	IN: Lake and Porter
NJ	C-769	CSX	Trenton to Port Reading, NJ	NJ: Somerset and Mercer
NJ	S-211	Shared	Nave to N Bergen, NJ	NJ: Bergen
NJ	S-032	Shared	PN to Bayway, NJ	NJ: Union and Essex
NY	C-052	CSX	CP Sycamore to Black Rock, NY	NY: Erie
<b>Buffalo, New York — Vermilion, Ohio</b>				
NY PA OH	N-070	NS	Buffalo FW, NY to Ashtabula, OH	NY: Erie and Chautauqua PA: Erie OH: Ashtabula
OH	N-075	NS	Ashtabula to Cleveland, OH	OH: Ashtabula, Lake, and Cuyahoga
OH	N-080	NS	Cleveland to Vermilion, OH	OH: Cuyahoga, Lorain, and Erie
<b>Marion — Toledo, Ohio</b>				
OH	C-070	CSX	Marion to Fostoria, OH	OH: Marion, Wyandot, and Seneca
OH	C-228	CSX	Fostoria to Toledo, OH	OH: Seneca and Wood
<b>Quaker — Deshler, Ohio</b>				
OH	C-073	CSX	Quaker to Mayfield, OH	OH: Cuyahoga
OH	C-072	CSX	Mayfield to Marcy, OH	OH: Cuyahoga
OH	C-069	CSX	Marcy to Short, OH	OH: Cuyahoga
OH	C-074	CSX	Short to Berea, OH	OH: Cuyahoga
OH	C-061	CSX	Berea to Greenwich, OH	OH: Cuyahoga, Lorain, and Huron
OH	C-068	CSX	Greenwich to Willard, OH	OH: Huron
OH	C-075	CSX	Willard to Fostoria, OH	OH: Huron and Seneca
OH	C-206	CSX	Fostoria to Deshler, OH	OH: Seneca, Wood, and Henry
OH	C-695	CSX	CP Maumee to Oak, OH	OH: Wood and Lucas

**Table 7-6**  
**Preliminary Rail Line Segments That May Warrant**  
**Emergency Response (Major Key Route) Mitigation**

State	Site ID	Proposed Owner	Segment	County
OH	N-081	NS	White to Cleveland, OH	OH: Cuyahoga
PA	C-766	CSX	West Falls to CP Newtown Junction, PA	PA: Philadelphia
AL TN	C-373	CSX	Nashville, TN to Stevenson, AL	AL: Jackson TN: Davidson, Rutherford, Bedford, Coffee, and Franklin

**Table 7-7  
Preliminary Highway/Rail At-Grade Crossings That May Warrant Traffic Delay Mitigation**

State	County, City	Segment and FRA Crossing ID		Crossing Name	Warning Device Type	LOS Change	Acquisition-Related Train Traffic			Recommended Mitigation
		Pre-	Post				Change			
IL	Cook, Calumet Park	C-010	163415H	Dixie Hwy.	Gates	D to E	17.0	32.9	15.9	Grade Separation
	Cook, Calumet Park	C-010	163416P	Broadway - 135 <sup>th</sup> St.	Gates	D to E	17.0	32.9	15.9	Grade Separation
	Cook, Evergreen Park	C-011	163433F	95 <sup>th</sup> St.	Gates	D to E	19.5	22.9	3.4	Consultation
IN	De Kalb, Garrett	C-066	155330K	Randolph Street	Gates	E to F	21.4	47.7	26.3	Grade Separation
	Madison, Alexandria	N-040	474600L	SR 9	Flashing lights	>30 sec. delay <sup>a</sup>	2.6	11.8	9.2	Consultation
	Madison, Alexandria	N-040	474601T	Harrison St.	Gates	>30 sec. delay <sup>a</sup>	2.6	11.8	9.2	Consultation
	Tippecanoe, Lafayette	N-045	484295F	Ferry St.	Gates	C to D	23.6	41.0	17.4	Complete Lafayette Bypass
	Tippecanoe, Lafayette	N-045	484296M	Main St.	Gates	C to D	23.6	41.0	17.4	Complete Lafayette Bypass
	Tippecanoe, Lafayette	N-045	484298B	Columbia St.	Gates	C to D	23.6	41.0	17.4	Complete Lafayette Bypass
	Tippecanoe, Lafayette	N-045	484300A	South St., SR 26	Gates	C to D	23.6	41.0	17.4	Complete Lafayette Bypass
	Tippecanoe, Lafayette	N-045	484301G	9 <sup>th</sup> St.	Gates	C to D	23.6	41.0	17.4	Complete Lafayette Bypass

**Table 7-7  
Preliminary Highway/Rail At-Grade Crossings That May Warrant Traffic Delay Mitigation**

State	County, City	Segment and FRA Crossing ID		Crossing Name	Warning Device Type	LOS Change	Acquisition-Related Train Traffic			Recommended Mitigation
		Pre-	Post				Change			
	Tippecanoe, Lafayette	N-045	484309L	4 <sup>th</sup> St., U.S. 231	Gates	C to D	23.6	41.0	17.4	Complete Lafayette Bypass
	Tippecanoe, Lafayette	N-046	484290W	Underwood St.	Flashing lights	B to D	18.4	40.2	21.8	Complete Lafayette Bypass
	Tippecanoe, Lafayette	N-046	484292K	18 <sup>th</sup> St.	Flashing lights	B to D	18.4	40.2	21.8	Complete Lafayette Bypass
	Tippecanoe, Lafayette	N-046	484293S	17 <sup>th</sup> & Salem St.	Flashing lights	B to D	18.4	40.2	21.8	Complete Lafayette Bypass
	Tippecanoe, Lafayette	N-046	484294Y	Union St.	Gates	B to D	18.4	40.2	21.8	Complete Lafayette Bypass
	Vanderburgh, Evansville	C-025	342846U	W. Maryland St.	Flashing lights	C to D	22.3	30.8	8.5	Increase Train Speed from 25 to 30 mph
	Vanderburgh, Evansville	C-025	342848H	W. Franklin St.	Gates	C to D	22.3	30.8	8.5	Consultation
	Vanderburgh, Evansville	C-025	342850J	Ohio St.	Flashing lights	C to D	22.3	30.8	8.5	Consultation
KY	Christian, Hopkinsville	C-021	345267V	E. 9 <sup>th</sup> St.	Gates	D to E	23.4	32.7	9.3	Grade Separation
	Hopkins, Madisonville	C-021	345331S	W. Noel Ave.	Flashing lights	D to E	23.4	32.7	9.3	Grade Separation

**Table 7-7  
Preliminary Highway/Rail At-Grade Crossings That May Warrant Traffic Delay Mitigation**

State	County, City	Segment and FRA Crossing ID		Crossing Name	Warning Device Type	LOS Change	Acquisition-Related Train Traffic			Recommended Mitigation
		Pre-	Post				Change			
MD	Baltimore City	C-032	140239X	Hollins Ferry Rd.	Flashing lights <sup>b</sup>	C to D	39.6	42.7	3.1	Increase Train Speed from 35 to 40 mph
	Prince George's, Hyattsville	C-030	140253T	Decatur St.	Flashing lights <sup>b</sup>	C to D	18.7	24.3	5.6	Increase Train Speed from 25 to 30 mph
	Prince George's, Bladensburg	C-030	140257V	Upshur St.	Flashing lights <sup>b</sup>	C to D	18.7	24.3	5.6	Increase Train Speed from 25 to 30 mph
	Prince George's, Cheverly	C-030	140258C	Annapolis Rd.	Gates	C to D	18.7	24.3	5.6	Increase Train Speed from 25 to 30 mph
OH	Butler, Hamilton	C-063	152407K	Vine St.	Gates	E to E	28.2	31.2	3.0	Consultation
	Cuyahoga, Brookpark	C-074	523971H	Hummel Rd.	Gates	B to D	13.4	47.3	33.9	Increase Train Speed from 35 to 40 mph
	Cuyahoga, Brookpark	C-074	523973W	Engle Rd.	Gates	B to D	13.4	47.3	33.9	Increase Train Speed from 35 to 40 mph
	Hamilton, Cincinnati	C-063	152346W	Winton Rd.	Flashing lights	E to E	28.2	31.2	3.0	Consultation
	Hamilton, Cincinnati	C-063	152347D	Mitchell Ave.	Flashing lights	E to F	28.2	31.2	3.0	Consultation
	Hamilton, Cincinnati	C-063	152355V	Township Ave.	Gates	E to E	28.2	31.2	3.0	Consultation

**Table 7-7**  
**Preliminary Highway/Rail At-Grade Crossings That May Warrant Traffic Delay Mitigation**

State	County, City	Segment and FRA Crossing ID		Crossing Name	Warning Device Type	LOS Change	Acquisition-Related Train Traffic			Recommended Mitigation
		Pre-	Post				Change			
	Lorain, Wellington	C-061	518530A	Main St.	Gates	B to D	14.5	54.2	39.2	Increase Train Speed from 40 to 45 mph
PA	Erie, Erie	N-070	471901W	Peach St.	Gates	C to E	13.0	25.2	12.2	Reroute trains to CSX corridor
	Erie, Erie	N-070	471902D	Sassafras St.	Gates	D to E	13.0	25.2	12.2	Reroute trains to CSX corridor
	Erie, Erie	N-070	471906F	Cherry St.	Flashing lights	C to E	13.0	25.2	12.2	Reroute trains to CSX corridor
	Erie, Erie	N-070	471908U	Liberty St.	Flashing lights	C to E	13.0	25.2	12.2	Reroute trains to CSX corridor
	Erie, Erie	N-070	471911C	Raspberry St.	Flashing lights	C to E	13.0	25.2	12.2	Reroute trains to CSX corridor
	Westmoreland, W. Newton	C-033	145480R	Main St.	Flashing lights	C to D	27.7	32.8	5.1	Consultation

<sup>a</sup> Significant traffic delay involves increased delay per stopped vehicle, which is not related to traffic level of service.

<sup>b</sup> SEA intends to recommend that the Board require the Applicants to upgrade the crossing warning devices at these locations before increasing train speeds.

**Table 7-8**  
**Preliminary Rail Line Segments That May Warrant Noise Mitigation**

State	Site ID	Proposed Owner	Description	Counties
OH	C-061	CSX	Berea to Greenwich, OH	Cuyahoga, Huron, and Lorain
	C-065	CSX	Deshler to Toledo, OH	Henry and Wood
	C-072	CSX	Mayfield to Marcy, OH	Cuyahoga
	C-073	CSX	Quaker to Mayfield, OH	Cuyahoga
	C-074	CSX	Short to Berea, OH	Cuyahoga
	N-079	NS	Oak Harbor to Bellevue, OH	Huron, Ottawa, and Sandusky
MI	S-020	Shared	Carleton to Ecorse, MI	Monroe and Wayne

**Table 7-9**  
**Preliminary Communities That May Warrant Environmental Justice Mitigation**

State	Site ID	Proposed Owner	Description/Community	Potential Impacts
IL	C-010	CSX	Barr Yard to Blue Island Blue Island, IL	Noise <sup>a</sup> and Traffic Delay
IL	CM-2	CSX	59 <sup>th</sup> Street Chicago Intermodal Yard Chicago, IL	Traffic
IN	C-027	CSX	Willow Creek to Pine Jct. Gary, IN	Noise <sup>a</sup> , Hazardous Materials Transport, and Highway/Rail At-Grade Crossing Safety
	N-041	NS	Butler to Fort Wayne Fort Wayne, IN	Noise <sup>a</sup> , Hazardous Materials Transport, and Highway/Rail At-Grade Crossing Safety
IN IL	N-045	NS	Lafayette Junction to Tilton, IL Tilton, IL, Danville, IL, and Lafayette, IN	Noise <sup>a</sup> , Hazardous Materials Transport, and Highway/Rail At-Grade Crossing Safety

**Table 7-9  
Preliminary Communities That May Warrant Environmental Justice Mitigation**

State	Site ID	Proposed Owner	Description/Community	Potential Impacts
MD DC	C-030	CSX	Alexandria Jct., MD to Benning Rd., DC Bladensburg, and Hyattsville, MD	Traffic Delay
MD	C-031	CSX	Alexandria Jct., MD to Washington, DC Bladensburg, MD and Washington, DC	Hazardous Materials Transport
MD	C-032	CSX	Baltimore to Relay Baltimore, MD	Traffic Delay
OH	C-072	CSX	Mayfield to Marcy Cleveland, OH	Noise and Hazardous Materials Transport
	C-073	CSX	Quaker to Mayfield Cleveland, OH	Noise and Hazardous Materials Transport
	N-075	NS	Cleveland to Ashtabula Ashtabula, OH and Cleveland, OH	Noise <sup>a</sup> and Hazardous Materials Transport
	N-081	NS	White to Cleveland Ashtabula, OH and Cleveland, OH	Noise <sup>a</sup> and Hazardous Materials Transport
	N-082	NS	Youngstown to Ashtabula Youngstown, OH Ashtabula, OH	Noise <sup>a</sup> and Hazardous Materials Transport
	N-086	NS	Miami to Airline Toledo, OH	Freight Rail Safety
PA	N-090	NS	Harrisburg to Rutherford Harrisburg, PA	Freight Rail Safety

<sup>a</sup> SEA's noise analysis shows an Acquisition-related increase in noise levels in these communities, however the increase does not warrant mitigation at this time. However, because there are other potential significant environmental impacts in this community, noise effects have been included to consider potential cumulative effects.

## **CHAPTER 8**

### **List of Preparers**

#### **SURFACE TRANSPORTATION BOARD SECTION OF ENVIRONMENTAL ANALYSIS**

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De Leuw, Cather & Company LI A. BOCCIA	M.A. Planning, B.A.; 23 years in environmental planning and impact assessment for transportation projects	Environmental Tasks and Document Manager

<u>Name/Company</u>	<u>Experience</u>	<u>Project Function</u>
HDR Engineering, Inc. MARGARET M. BALLARD, AICP	M.S., Urban Planning, B.A. History; 23 years in transportation planning and environmental assessment	Environmental Tasks and Document Manager
HDR Engineering, Inc. DAVID W. BIRKS	M.S. Civil & Environmental Engineering, B.S. Biology; 20 years in environmental planning, impact assessment and community information for projects of all types	Public Outreach Task Manager
De Leuw, Cather & Company JOHN H. COOK	M.B.A., B.S.C.; 14 years in transportation planning and operations, personnel management, and budgeting	Administrative Manager
HDR Engineering, Inc. DAVID A. CHEENEY, AICP	M.P.A., Urban Planning & Public Administration, B.A.; 19 years in environmental planning, urban planning, transportation planning, and solid waste planning	Administrative Manager
Public Affairs Management, Inc. BONNIE A. NIXON	B.A. Communications; 15 years in strategic management of public participation programs for federal, state & regional agencies	Public Outreach Manager

### TECHNICAL TEAMS

<u>Name/Company</u>	<u>Experience</u>	<u>Project Function</u>
<b>Air Quality Analysis</b>		
The Air Quality team consisted of 13 specialists in two firms.		
HDR Engineering, Inc. EDWARD J. LIEBSCH	M.S. Meteorology, B.A. Earth Science; 16 years in air quality impact analysis and permitting	Air Quality Team Leader
KM Chng Environmental DAVID A. ERNST	M.C.R.P. Environmental Policy, B.S. Urban Systems Engineering; 18 years in air quality regulation, permitting & impact analysis	Air Quality Task Leader
<b>Cultural and Historic Resources</b>		
The Cultural and Historic Resources team consisted of 20 specialists in eight firms.		
HDR Engineering, Inc. BARRY R. WHARTON	M.A. Archaeology, B.A. Anthropology; 18 years in cultural resource impact assessments and Section 106 compliance	Cultural Resources Team Leader/ Section 106 Compliance
Myra L. Frank & Associates, Inc. MYRA L. FRANK	M.A. Urban Government, B.A. Political Science; 25 years in environmental planning & 17 years as principal of Myra L. Frank & Associates, Inc.	Cultural Resources Methodology/Policy Specialist
McGinley Hart & Associates, Inc. PAUL J. MCGINLEY	M.P.A. Urban Planning, B.S.C.E.; 31 years historic preservation planning, impact assessment and mitigation for urban & transportation projects	Cultural Resources/Section 106 Compliance Specialist

<u>Name/Company</u>	<u>Experience</u>	<u>Project Function</u>
McGinley Hart & Associates, Inc. THOMPSON S. LINGEL	M.A. Architecture & Historic Preservation, A.B.; 20 years in historic preservation and impact assessment & mitigation	Cultural Resources/Section 106 Compliance Specialist
Historic Conservation and Interpretation, Inc. EDWARD S. RUTSCH	M.A. Anthropology, B.S.; 32 years as teacher & practicing anthropologist/archaeologist and urban industrial archaeologist	Cultural Resources/Section 106 Compliance Analyst
Central Mississippi Valley Archaeological Research Institute JOHN E. KELLEY	Ph.D., M.A., B.A. Anthropology; 22 years as professor & practicing anthropologist/archaeologist including mitigation measures in transportation projects.	Section 106 Compliance/Archaeological Survey Analyst
PS Preservation Services JOHN SNYDER	M.A. History of Art/Architectural History; 21 years in architectural & bridge history and bridge preservation technology	Railroad Bridge Historian
Benjamin D. Rickey & Co. JEFF DARBEE	B.A. American Civilization; 23 years in historic preservation & American History	Ohio Railroad History Analyst
ASC Group, Inc. SHAUNE SKINNER	M.A. Anthropology, B.A. Museology; 20 years in cultural & archaeological resources assessment and preservation law	Archaeologist, Ohio and Indiana

<u>Name/Company</u>	<u>Experience</u>	<u>Project Function</u>
<b>Energy</b>		
De Leuw, Cather & Company JAMES R. GREGORY	M.A. Urban & Environmental Planning, B.S. Biology; over 10 years in environmental planning & management	Energy Team Leader
<b>Hazardous Material - Sites and Transport</b>		
The Hazardous Material team consisted of nine specialists in two firms.		
HDR Engineering, Inc. SUSAN L. YOUNG, C.P.G.	B.S. Geology; 18 years in environmental geology & project management for environmental projects	Hazardous Waste Team Leader
The Environmental Company, Inc. CLIFFORD S. DUKE, PH. D.	Ph.D. Botany, M.A. Policy Science, B.A. Biology/ Environmental Studies; 4 years in biology research, 8 years in environmental impact assessment and project management	Hazardous Materials Team Co-Leader
<b>Land Use/Environmental Justice</b>		
The Land Use/Environmental Justice team consisted of seven specialists in three firms.		
De Leuw, Cather & Company CARMEN D. GILOTTE	B.S. Natural Resources Mgmt. & Urban Planning; 8 years in NEPA assessments, environmental & urban planning, natural resource mgmt planning, & environmental policy analysis	Land Use Team Leader; Environmental Justice Team Co-leader

<u>Name/Company</u>	<u>Experience</u>	<u>Project Function</u>
De Leuw, Cather & Company ROBIN E. JOSEPH	M.A. Urban Planning, B.A. Political Science; 3 years in transportation & land use planning, transportation policy analysis, environmental justice and conflict management & resolution	Environmental Justice Team Co-leader
HDR Engineering, Inc. DAVID TAYLOR, AICP	M.A. Urban & Regional Planning; 25 years in land use planning, comprehensive and redevelopment planning, urban design & NEPA	Land Use/Environmental Justice Analyst
Public Affairs Management SCOTT STEINWERT	B.S. Biology; Graduate Work in Ecology; 10 years in community planning, NEPA analysis, and the preparation of environmental studies, particularly for transportation projects	Land Use/Environmental Justice Analyst

**Natural and Biological Resources**

The Natural and Biological Resources team consisted of seven specialists in two firms

HDR Engineering, Inc. WILLIAM J. JEFFORDS, JR.	B.S. General Science Education; 10 years in environmental impact assessment & planning for transportation projects	Natural Resources Team Leader
De Leuw, Cather & Company MAUREEN J. MILLS	B.S. Biology; 14 years in biology and natural resource inventories, environmental assessments, & ecological and wildlife studies for transportation projects	Natural Resources Specialist

<u>Name/Company</u>	<u>Experience</u>	<u>Project Function</u>
<b>Noise</b>		
The Noise team consisted of seven specialists in two firms.		
Acentech, Incorporated DAVID E. COATE	B.A. Mathematics, B.A. Chemistry, B.A. Physics, M.S. Energy Technology; 20 years in acoustics & environmental studies	Noise Analysis Team Leader
HDR Engineering, Inc. TIMOTHY G. CASEY	B.S. Biology; 8 years in noise monitoring & modeling, regulatory review, & environmental reporting	Noise Analysis Manager

**Railroad Operations**

The Railroad Operations team consisted of nine specialists in three firms.

HDR Engineering, Inc. WILLIAM D. BURGEL	M.S. Geology, B.S. Engineering; 26 years in railroad engineering & operations and railroad negotiations with public agencies	Railroad Operations Team Leader
De Leuw, Cather & Company ROBERT ROONEY	B.S. Management; 20 years in railroad operations planning & analysis	Rail Operations Passenger Interface Analyst
Rail Trac Associates JOHN G. PINTO	B.A. Social Sciences; 21 years in railroad rights of way acquisition, management, and analysis	Railroad Property and Operating Agreements Review Specialist

<u>Name/Company</u>	<u>Experience</u>	<u>Project Function</u>
<b>Railroad Safety</b>		
The Railroad Operations team consisted of 11 specialists in three firms.		
World Wide Rail PHIL OLEKSZYK	M.B.A. Behavioral Science, B.S.M.E. Mechanical Engineering; 12 years in railroad federal safety enforcement, 10 years in railroad research	Safety Team Leader
De Leuw, Cather & Company CHARLES DeWEESE	B.S. Mathematics; 35 years in railroad operations & safety	Rail Operations Analyst
HDR Engineering, Inc. BRUCE R. SMITH, P.E.	B.S. Civil Engineering; 20 years in design and construction oversight of railroad and rail transit projects, including track inspection and development of track maintenance and repair programs	Railroad Operations/Safety/Transportat ion Analyst

**Traffic and Transportation**

The Traffic and Transportation team consisted of eight specialists in two firms.

De Leuw, Cather & Company EDWARD Y. PAPA ZIAN, P.E.	M.S. Civil Engineering; B.S. Civil Engineering; 28 years in traffic engineering	Traffic/Transportation Team Leader
HDR Engineering, Inc. MICHAEL J. SHOSTAK, P.E.	B.S. Civil Engineering; 13 years in railroad, highway & traffic engineering	Traffic/Transportation Manager for Intermodals

<u>Name/Company</u>	<u>Experience</u>	<u>Project Function</u>
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**PUBLIC OUTREACH**

The Public Outreach team consisted of six specialists in two firms.

Public Affairs Management, Inc. KAY A. WILSON	M.A. Community & Regional Planning, B.A. Political Science; 28 years in environmental planning & public involvement	Government/Agency Coordinator
HDR Engineering JOHN W. RUSHING, P.E.	M.S.C.E. Water Resource Management, B.S.C.E.; 35 years in planning and engineering management, including more than 20 years in environmental analysis	Agency Coordination Manager

**NEPA and Legal Issues**

The NEPA and Legal Issues team consisted of seven specialists in four firms.

HDR Engineering, Inc. MARTIN J. JOYCE, P.E.	B.S. Civil Engineering; 20 years in project management, quality control, and transportation planning with focus on complex EIS projects	NEPA Compliance Advisor Quality Assurance/Quality Control
Kutak Rock BARRY P. STEINBERG, Esq.	LLB, B.A. Psychology; 31 years as military and private-sector environmental law compliance and enforcement officer	Study Legal Advisor
Kutak Rock NANCY A. ROBERTS, Esq.	Juris Doctor; 20 years in environmental law, including NEPA conformance	Study Legal Advisor for Railroad Operations and Jurisdiction
Consultant DEBRA L. RICHARDS	M.B.A., B.S. Business Admin.; 10 years in project management; focus on environmental projects	NEPA Compliance Advisor

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## **HAZARDOUS WASTE**

### **ILLINOIS**

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#### **Exermont (CSX Construction)**

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#### **Lincoln Avenue (CSX Construction)**

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**Kankakee (NS Construction)**

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### **Willow Creek (CSX Construction)**

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Duke, Clifford, telephone interview with Fire Chief George Nickos, August 11, 1997, Portage, Indiana.

USGS. 7.5-minute Series Map (Topographic). Portage Quadrangle, Indiana (1992).

### **Butler (NS Construction)**

EDR. (1997, January 22). The EDR-Radius Map with GeoCheck™: Butler, IN 46404. Inquiry Number: 0155380.3r.

Duke, Clifford, telephone interview with Fire Chief Rick Husted, August 12, 1997, Butler, Indiana.

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EDR. (1997, April 25). The EDR-Radius Map with GeoCheck™: Tolleston, IN 46404. Inquiry Number: 0171851.6r.

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**MARYLAND**

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## MICHIGAN

### **Ecorse Junction (NS Construction)**

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## NEW JERSEY

### **Little Ferry (CSX Construction)**

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USGS. 7.5-minute Series Map (Topographic). Weehawken Quadrangle, New Jersey-New York (1967, photorevised 1981).

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### **Blasdell (NS Construction)**

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### **Gardenville (NS Construction)**

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## **OHIO**

### **Collinwood (CSX Construction)**

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**Willard (CSX Construction)**

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**Oak Harbor (NS Construction)**

EDR (1997, January 20). The EDR-Corridor Study Report™: Oak Harbor, OH 434149. Inquiry Number 155371.3r

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**Vermilion (NS Construction)**

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**Toledo to Maumee (NS Abandonment)**

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Isham, John, telephone interview with Toledo Fire Deputy Chief Philip J. Koenigseker, September 19, 1997, Toledo, Ohio.

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- Gillespie, Jason, telephone interview with Mr. James Johnson, Illinois Office Natural Resources Conservation Services, September 9, 1997.

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- Gillespie, Jason, telephone interview with Mr. James Grusso of National Park Service - Midwest Region, September 10, 1997.
- Gillespie, Jason, telephone interview with Mr. Michael Jewell of U.S. Army Corps of Engineers - Chicago District, September 10, 1997.
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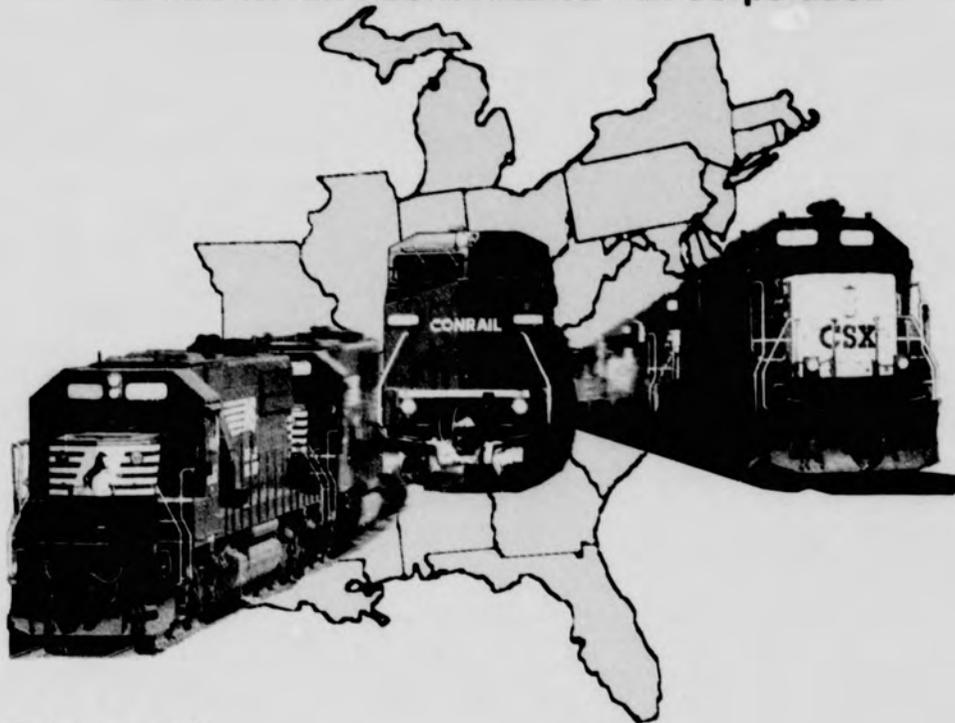
# DRAFT ENVIRONMENTAL IMPACT STATEMENT

Finance Docket No. 33388

## "PROPOSED CONRAIL ACQUISITION"

**CSX Corporation and CSX Transportation, Inc.  
Norfolk Southern Corporation and  
Norfolk Southern Railway Company**

**Control and Operating Leases/Agreements  
Conrail Inc. and Consolidated Rail Corporation**



**Volume 5A**

Appendices A-K

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**SURFACE TRANSPORTATION BOARD**  
**Finance Docket No. 33388**

**CSX Corporation and CSX Transportation, Inc.**  
**Norfolk Southern Corporation and Norfolk Southern Railway Company**  
--Control and Operating Leases/Agreements--  
**Conrail Inc. and Consolidated Rail Corporation**

**GUIDE TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT**

This Draft Environmental Impact Statement (Draft EIS) evaluates the potential environmental effects that could result from the proposed Acquisition of Conrail Inc. and Consolidated Rail Corporation (Conrail) by CSX Corporation and CSX Transportation, Inc. (CSX) and Norfolk Southern Corporation and Norfolk Southern Railway Company (NS). The Surface Transportation Board's Section of Environmental Analysis (SEA) has prepared this document in accordance with the requirements of National Environmental Policy Act (NEPA), as amended (42 U.S.C. 4321), Council on Environmental Quality (CEQ) implementing NEPA, the Board's environmental rules (49 CFR Part 1105) and other applicable environmental statutes and regulations.

The Draft Environmental Impact Statement includes the following:

An **Executive Summary** which provides an overview and summary of the Draft EIS including and proposed mitigation.

**Volume 1: Chapters 1 through 4**

- Chapter 1 discusses the purpose and need for the project and sets forth the jurisdiction of the Surface Transportation Board (Board) and reviewing agencies. It also presents the parties to the proposed Acquisition, SEA's environmental review process and the agency coordination and public participation process.
- Chapter 2 describes the three railroads' existing network, the proposed Acquisition, alternatives considered, and related actions.
- Chapter 3 contains a description of the analysis methods and potential mitigation strategies.
- Chapter 4 presents system-wide and regional settings, potential effects of the proposed action, and measures to mitigate adverse effects. It also summarizes the No-Action alternative and discusses cumulative effects; the relationship between short-term uses of the environment and enhancement of long-term productivity; and irreversible and irretrievable commitments of resources.

**Volume 2 (A through C): Safety Integration Plans**

These volumes (2A through 2C) consist of the Applicants' Safety Integration Plans, Board Decision requiring these plans, and U.S. Department of Transportation comments on rail safety.

**Volume 3: State Setting, Impacts, and Proposed Mitigation**

- These two volumes (3A and 3B) consist of a series of sections which discuss the setting, impacts, and proposed mitigation by state. The potential impacts of individual segments, intermodal facilities, rail yards, new constructions, abandonments, and other types of action are part of this discussion.
- Volume 3A contains the states Alabama through Missouri.
- Volume 3B contains the states New Jersey through Washington, D.C.

**Volume 4: Chapter 6 through 8 and References**

- Chapter 6 describes SEA's agency coordination and public outreach efforts including the scoping process and document distribution.
- Chapter 7 presents SEA's preliminary mitigation recommendations to the Board.
- Chapter 8 contains a list of document preparers.

**Volume 5: Appendices**

- These three volumes (5A through 5C) contain the methods, extensive tables, and other pertinent data by discipline as well as public outreach and agency coordination documents and verified statements.
- Volume 5A contains the technical appendices.
- Volume 5B contains the public and agency correspondence, public outreach materials, and responses from other railroads.
- Volume 5C contains verified statements, relevant Board Decisions, Federal regulations, site visit summaries, and other pertinent information.

**Volume 6: Proposed Abandonments**

This volume provides detailed analysis and mitigation of the potential environmental impacts associated with the proposed abandonment of line segments and related salvage activities.

To assist the reader in the review of this document, a Glossary and List of Acronyms are included in front of each volume.

## LIST OF ACRONYMS AND ABBREVIATIONS

<b>ACHP</b>	Advisory Council on Historic Preservation
<b>ADT</b>	Average Daily Traffic
<b>AQCR(s)</b>	Air Quality Control Region(s)
<b>BIA</b>	Bureau of Indian Affairs
<b>BMPs</b>	Best Management Practices
<b>BN</b>	Burlington Northern & Santa Fe Railroad Company
<b>CAAA</b>	Clean Air Act and Amendments
<b>CERCLIS</b>	Comprehensive Environmental Response, Compensation, and Liability Information System
<b>CFR</b>	Code of Federal Regulations
<b>CN</b>	Canadian National
<b>CO</b>	Carbon Monoxide
<b>COE</b>	United States Army Corps of Engineers
<b>CSX</b>	CSX Transportation, Inc.

<b>CTC</b>	Centralized Traffic Control
<b>CWA</b>	Clean Water Act
<b>CZMA</b>	Coastal Zone Management Act
<b>db</b>	Decibel
<b>dBA</b>	Decibels (of sound) A range
<b>DOT</b>	United States Department of Transportation
<b>EA</b>	Environmental Assessment
<b>EPA</b>	Environmental Protection Agency
<b>ERNS</b>	Emergency Response Notification System
<b>FEMA</b>	Federal Emergency Management Agency
<b>FHWA</b>	Federal Highway Administration
<b>FIRM</b>	Flood Insurance Rate Maps
<b>FMEA</b>	Failure Mode and Effects Analysis

<b>FRA</b>	Federal Railroad Administration
<b>HC</b>	Hydrocarbons (in air)
<b>IC</b>	Illinois Central
<b>ICC</b>	Interstate Commerce Commission (former licensing agency for the proposed Acquisition; Acquisition approval authority now with the Surface Transportation Board)
<b>ISTEA</b>	Intermodal Surface Transportation Efficiency Act
<b>L<sub>dn</sub></b>	Day-night equivalent sound level
<b>L<sub>max</sub></b>	Maximum sound level during train passby, dBA
<b>LIRR</b>	Long Island Rail Road
<b>LOS</b>	Level of Service
<b>LUST</b>	Leaking Underground Storage Tank
<b>MARC</b>	Maryland Rail Commuter
<b>MNR</b>	Metro North Railroad
<b>MOU</b>	Memorandum of Understanding

<b>MP</b>	Mile Post
<b>MPH</b>	Miles per Hour
<b>NAAQS</b>	National Ambient Air Quality Standards
<b>NEC</b>	Northeast Corridor
<b>NEPA</b>	National Environmental Policy Act of 1969
<b>NHPA</b>	National Historic Preservation Act of 1966
<b>NJT</b>	New Jersey Transit
<b>NO<sub>2</sub></b>	Nitrogen dioxide
<b>NO<sub>x</sub></b>	Nitrogen oxides
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NMFS</b>	National Marine Fisheries Service
<b>NPDES</b>	National Pollution Discharge Elimination System
<b>NPL</b>	National Priorities List
<b>NPS</b>	National Park Service

<b>NRCS</b>	Natural Resources Conservation Service
<b>NRHP</b>	National Register of Historic Places
<b>NS</b>	Norfolk Southern Railway Company
<b>NWI</b>	National Wetlands Inventory
<b>O<sub>3</sub></b>	Ozone
<b>OSHA</b>	Occupational Safety and Health Administration
<b>OTR</b>	Ozone Transport Region
<b>Pb</b>	Lead
<b>PDEA</b>	Preliminary Draft Environmental Assessment
<b>PM<sub>10</sub></b>	Particulate Matter (under 10 microns in diameter)
<b>PSD</b>	Prevention of Significant Deterioration
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>RCRIS</b>	Resource Conservation and Recovery Information System
<b>ROW</b>	Right-of-Way

<b>SEA</b>	Section of Environmental Analysis
<b>SEPTA</b>	Southeast Pennsylvania Transit Authority
<b>SCS</b>	Soil Conservation Service (currently named Natural Resources Conservation Service, Division of United States Department of Agriculture)
<b>SEL</b>	Source sound exposure level at 100 feet, dBA
<b>SHPO</b>	State Historic Preservation Officer
<b>SIP</b>	State Implementation Plan
<b>SO<sub>2</sub></b>	Sulfur dioxide
<b>SO<sub>x</sub></b>	Sulfur oxides
<b>SPL</b>	State Priority List
<b>STATSGO</b>	State Soil Geographic Database
<b>STB</b>	Surface Transportation Board
<b>SWLF</b>	State Inventory of Solid Waste Facilities
<b>TRAA</b>	Terminal Railroad Association of St. Louis

<b>TSD</b>	Treatment, Storage, or Disposal Sites
<b>TSP</b>	Total Suspended Particulates (particulate matter)
<b>UP/SP</b>	Union Pacific and Southern Pacific Railroad
<b>USC</b>	United States Code
<b>USDA</b>	United States Department of Agriculture
<b>USFWS</b>	United States Fish and Wildlife Service
<b>USGS</b>	United States Geological Survey
<b>VISTA</b>	VISTA Environmental Information, Inc.
<b>VOC</b>	Volatile organic compounds
<b>VRE</b>	Virginia Rail Express

## GLOSSARY

<b>at-grade roadway crossing</b>	The location where a local street or highway crosses railroad tracks at the same level or elevation.
<b>attainment area</b>	An area that meets National Ambient Air Quality Standards (NAAQS) specified under the Clean Air Act.
<b>A-weighted Sound Level (dBA)</b>	The most commonly used measure of noise, expressed in "A-weighted" decibels (dBA), is a single-number measure of sound severity that accounts for the various frequency components in a way that corresponds to human hearing.
<b>ballast</b>	Top surface of rail bed, usually composed of aggregate (i.e., small rocks and gravel).
<b>Best Management Practices (BMPs)</b>	Techniques recognized as very effective in providing environmental protection.
<b>Board</b>	Surface Transportation Board, the licensing agency for the proposed Conrail Acquisition.
<b>borrow material</b>	Earthen material used to fill depressions to create a level right-of-way.
<b>branch line</b>	A secondary line of railroad usually handling light volumes of traffic.
<b>bulk train</b>	Also known as a unit train. A complete train consisting of a single non-breakable commodity (such as coal, grain, semi-finished steel, sulfur, potash, or orange juice) with a single point of origin and destination.
<b>consist</b>	The make-up of a train, usually referring to the number of cars.
<b>construction footprint</b>	The area at a construction site subject to both permanent and temporary disturbances by equipment and personnel.
<b>Class I Railroad</b>	Railroads that exceed annual gross revenues of \$250 million, in 1991 dollars. The amount is indexed annually to reflect inflation. For 1996, the annual gross revenue was \$255 million.

<b>Criteria of Effect</b>	The Advisory Council on Historic Preservation's (ACHP) Criteria of Effect and Adverse Effect (35 CFR Part 800.9) provide the basis for determining potential effects on historic properties.
<b>criteria pollutant</b>	Any of six air emissions (lead, carbon dioxide, sulfur dioxide, nitrogen dioxide, ozone and particulate mater) regulated under the Clean Air Act, for which areas must meet national air quality standards.
<b>cultural resource</b>	Any prehistoric or historic district, site, building, structure, or object that warrants consideration for inclusion in the National Register of Historic Places (NRHP). For the purposes of this document, the term applies to any resource more than 50 years of age for which SEA gathered information to evaluate its significance.
<b>Day-Night Sound (<math>L_{dn}</math>)</b>	One of the most widely accepted measures of cumulative noise exposure in residential areas. The Day-Night Sound Level ( $L_{dn}$ ) is the A-weighted sound level, averaged over a 24-hour period, but with levels observed during the nighttime hours between 10 p.m. and 7 a.m., increased by 10 dBA to account for increased sensitivity at night.
<b>dBA</b>	Adjusted decibel level. A sound measurement that adjusts noise by filtering out certain frequencies to make it analogous to that perceived by the human ear. It applies what is known as an "A-weighting" scale to acoustical measurements.
<b>decibel (dB)</b>	A logarithmic scale that compresses the range of sound pressures audible to the human ear over a range from 0 to 140, where 0 decibels represents sound pressure corresponding to the threshold of human hearing, and 140 decibels corresponds to a sound pressure at which pain occurs. Sound pressure levels that people hear are measured in decibels, much like distances are measured in feet or yards.
<b>deciduous</b>	Any plant whose leaves are shed or fall off during certain seasons; usually used in reference to tree types.

<b>dray</b>	A local move of a trailer, truck, or container.
<b>emergent species</b>	An aquatic plant with vegetative growth mostly above the water.
<b>endangered species</b>	A species of plant or animal that is in danger of extinction throughout all or a significant portion of its range and is protected by state and/or federal laws.
<b>failure mode and effects analysis (FMEA)</b>	This analysis is a method of analyzing the causes and consequences of potential spills of stored and transported hazardous materials. This procedure helps reduce the risk of such spills by eliminating known causes.
<b>fill</b>	The term used by the United States Army Corps of Engineers that refers to the placement of suitable materials (e.g., soils, aggregates, concrete structures, etc.) within water resources under Corps jurisdiction.
<b>flat yard</b>	A system of relatively level tracks within defined limits for making up trains, storing cars, and other purposes which requires a locomotive to move cars (switch cars) from one track to another.
<b>Flood Insurance Rate Maps</b>	Maps available from the Federal Emergency Management Agency that delineate the land surface area of 100-year and 500-year flooding events.
<b>floodplain</b>	The lowlands adjoining inland and coastal waters and relatively flat areas and flood prone areas of offshore islands, including, at a minimum, that area inundated by a one percent (also known as a 100-year or Zone A floodplain) or greater chance of flood in any given year.
<b>frog</b>	A track structure used where two running rails intersect that permits wheels and wheel flanges on either rail to cross the other rail.
<b>habitat</b>	The place(s) where plant or animal species generally occur(s) including specific vegetation types, geologic features, and hydrologic features. The continued survival of that species depends upon the intrinsic resources of the habitat. Wildlife habitats are often further defined as places where species derive sustenance (foraging habitat) and reproduce (breeding habitat).

<b>haulage right</b>	The limited right of one railroad to operate trains over the designated lines of another railroad.
<b>hazardous materials</b>	Any material that poses a threat to human health and/or the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive.
<b>highway/rail at-grade crossing</b>	The location where a local street or highway crosses railroad tracks at the same level or elevation.
<b>historic property</b>	Any prehistoric or historic district, site, building, structure, or object that warrants consideration for inclusion in the National Register of Historic Places (NRHP). The term "eligible for inclusion in the NRHP" includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet NRHP listing criteria.
<b>hump yard</b>	A railroad classification yard in which the classification of cars is accomplished by pushing them over a summit, known as a "hump," beyond which they run by gravity.
<b>interlocking</b>	An arrangement of switch, lock, and signal appliances interconnected so that their movements succeed each other in a predetermined order, enabling a moving train to switch onto adjacent rails. It may be operated manually or automatically.
<b>intermodal facility</b>	A site or hub consisting of tracks, lifting equipment, paved areas, and a control point for the transfer (receiving, loading, unloading, and dispatching) of intermodal trailers and containers between rail and highway or rail and marine modes of transportation.
<b>intermodal train</b>	A train consisting or partially consisting of highway trailers and containers or marine containers being transported for the rail portion of a multimodal movement on a time-sensitive schedule; also referred to as a piggyback, TOFC (Trailer on Flat Car), COFC (Container on Flat Car), and double stacks (for containers only).

<b>key routes</b>	As defined by the Association of American Railroads (AAR), a key route is a track that carries an annual volume of 10,000 car loads or intermodal tank loads of any hazardous material. AAR has developed voluntary industry key route maintenance and equipment guidelines designed to address safety concerns in the rail transport of hazardous materials. For analysis purposes, SEA has used the term "major key route" to identify routes where the volume of hazardous materials carried on a route would double and exceed a volume of 20,000 carloads as a result of the proposed Conrail Acquisition.
<b>key train</b>	The Association of American Railroads (AAR) defines a key train as any train handling five or more carloads of poison inhalation hazard (PIH) materials or a combination of 20 or more carloads containing hazardous materials. Under AAR voluntary industry guidelines, railroads impose operating restrictions on key trains to ensure safe rail transport of these materials. These restrictions include maximum speeds, and meeting and passing procedures.
<b><math>L_{dn}</math></b>	Nighttime noise level ( $L_n$ ) adjusted to account for the perception that a noise level at night is more bothersome than the same noise level would be during the day.
<b>Level of Service (LOS)</b>	Level of Service (rating A through F). A measure of the functionality of a highway or intersection that factors in vehicle delay, intersection capacity and effects to the street/highway network.
<b>lift</b>	A lift is defined as an intermodal trailer or container lifted onto or off of a rail car. For calculations, lifts are used to determine the number of trucks using intermodal facilities.
<b>locomotive, road</b>	One or more locomotives (or engines) designed to move trains between yards or other designated points.
<b>locomotive, switching</b>	A locomotive (or engine) used to switch cars in a yard, between industries, or in other areas where cars are sorted, spotted (placed at a shipper's facility), pulled (removed from a shipper's facility), and moved within a local area.

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<b>main line</b>	The principle line or lines of a railway.
<b>merchandise train</b>	A train consisting of single and/or multiple car shipments of various commodities.
<b>mitigation</b>	Actions to prevent or lessen negative effects.
<b>mobile source</b>	A term used in reference to air quality meaning a source of air emissions that are not in a fixed location, such as a locomotive or automobile.
<b>National Register</b>	A listing of historic places maintained by the Secretary of the Interior.
<b>National Wetlands Inventory</b>	An inventory of wetland types in the United States compiled by the U.S. Fish and Wildlife Service.
<b>noise</b>	Any undesired sound or unwanted sound.
<b>nonattainment</b>	An area that does not meet standards specified under the Clean Air Act.
<b>Non-point source discharge</b>	Pollution not associated with a specific, fixed outfall location (e.g., sewer pipe), such as runoff from a construction site.
<b>palustrine wetland</b>	Non-tidal wetland dominated by trees, shrubs or persistent emergent vegetation. Includes wetlands traditionally classified as marshes, swamps, or bogs.
<b>passby</b>	The passing of a train past a specific reference point.
<b>pick up</b>	To add one or more cars to a train from an intermediate (non-yard) track designated for the storage of cars.
<b>precursor</b>	A term used in reference to air quality, meaning an initial ingredient contributing to a subsequent air quality pollutant.
<b>prime farmland</b>	Land defined by the Natural Resource Conservation Service (NRCS) as having the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops.
<b>point source</b>	A distinct stationary source of air or water pollution such as a factory or sewer pipes.

<b>rail spur</b>	A track that diverges from a main line, also known as a spur track or rail siding, which typically serves one or more industries.
<b>rail yard</b>	A location where rail cars are switched and stored.
<b>railbanking</b>	A set-aside of abandoned rail corridor for recreational and/or transportation uses, including reuse for rail.
<b>receptor/receiver</b>	A land use or facility where sensitivity to noise or vibration is considered.
<b>right-of-way</b>	The strip of land for which an entity (e.g., a railroad) has a property right to build, operate, and maintain a linear structure, such as a road, railroad or pipeline.
<b>riparian</b>	Relating to, living, or located on, or having access to, the bank of a natural water course, sometimes also a lake or tidewater.
<b>riprap</b>	A loose pile or layer of broken stones erected in water or on soft ground as a guard against erosion.
<b>riverine wetland</b>	All wetlands and deepwater habitats contained within a channel, either naturally or artificially created.
<b>route miles</b>	Distance calculated along a railroad's main and branch lines.
<b>ruderal</b>	An introduced plant community dominated by weed species, typically adapted to disturbed areas.
<b>scrub-shrub</b>	Areas dominated by woody vegetation less than 6 meters (20 feet) tall, which includes shrubs and young trees.
<b>set out</b>	To remove one or more cars from a train at an intermediate (non-yard) location such as a siding, interchange track, spur track, or other track designated for the storage of cars.
<b>Section 106</b>	Refers to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended through 1992 (16 U.S.C. 470). Section 106 requires a Federal agency head performing a Federal undertaking to take into account the undertaking's effects on historic properties.

- sound** A physical disturbance in a medium (e.g., air) that is capable of being detected by the human ear.
- Sound Exposure Level (SEL)** A quantitative measure of the noise exposure produced by a given noise event. The sound exposure level (SEL) is equivalent in magnitude to a reference signal with a duration of one second. The SEL accounts for both the magnitude and duration of the noise event and can be used to calculate the contribution of specific events to the overall noise environment. The SEL is representative of the total sound energy produced by the event at an observation point; it indicates the constant sound level with one second duration that corresponds to the same total sound energy as the given event.
- take or taking** Refers to a removal of property, an acquisition of right-of-way, or a loss and/or degradation of species' habitat.
- threatened** A species that is likely to become an endangered species within the foreseeable future throughout all or part of its range, and is protected by state and/or federal law.
- trackage rights** The right or combination of rights of one railroad to operate over the designated trackage of another railroad including, in some cases, the right to operate trains over the designated trackage; the right to interchange with all carriers at all junctions; the right to build connections or additional tracks in order to access other shippers or carriers.
- turnout** A track arrangement consisting of a switch and frog with connecting and operating parts, extending from the point of the switch to the frog, which enables engines and cars to pass from one track to another.
- unit train** A train consisting of cars carrying a single commodity, e.g., a coal train (see also bulk train).
- water resources** An all inclusive term that refers to many types of permanent and seasonally wet/dry surface water features including springs, creeks, streams, rivers, ponds, lakes, wetlands, canals, harbors, bays, sloughs, mudflats, and sewage-treatment and industrial waste ponds.

**wetland**

As defined by 40 CFR Part 230.3, wetlands are "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include swamps, marshes, bogs, and similar areas.

**wye track**

A principal track and two connecting tracks arranged like the letter "Y" on which locomotives, cars and trains may be turned.

**yard truck**

Any truck that has delivery into a rail yard.

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**APPENDIX A**  
**Rail Line Segments and Traffic Density Changes**

## **APPENDIX A**

### **Rail Line Segments and Traffic Density Changes**

Conrail, CSX, and NS (Applicants) state the proposed Conrail Acquisition is intended to provide freight shippers with more efficient, competitive, and comprehensive rail service. The major emphasis and predicted benefits stressed by the Applicants are competitive access to most of the major markets east of the Mississippi River and seamless service on major east-west and north-south routes. Service between the northeast, southern and south-central states can only be accomplished by interchange of trains between rail carriers since Conrail is presently the sole Class 1 carrier serving the northeastern U.S.

The Applicants anticipate service improvements would result from implementation of the CSX and NS Operating Plans shown in Volumes 3A and 3B of the primary Application. These plans outline the apportionment of Conrail rail line segments and other facilities to be acquired by the respective railroads, car movement data collection and analysis, projected traffic levels, and adjusted train densities for rail line segments and yards across the post-Acquisition, expanded CSX, NS and Conrail Shared Asset systems. The Applicants used 1995 rail traffic volume movements for the three railroad systems as the basis of their train density analysis.

The Surface Transportation Board's Section of Environmental Analysis (SEA) used the analysis methods described in this Appendix to verify data provided in the Applicants' Operating Plans, Environmental Report, and associated errata. SEA used the resulting rail traffic data from their analysis to identify rail line segments meeting National Environmental Protection Act (NEPA) and the Surface Transportation Board (Board) regulations for environmental analysis. SEA analyzed rail line segments that meet or exceed the Board's thresholds for environmental analysis for noise and air quality (49 CFR 1105.7(5)).

SEA's verification and analysis of traffic data focused on the following elements:

- Train speeds.
- Trains per day.
- Gross ton miles.
- Rail line segments.
- Length of rail line segments within affected counties that meet or exceed the Board's thresholds for environmental analysis.
- Hazardous material carloads.
- Passenger and commuter rail operations.

## A.1 REGULATORY REQUIREMENTS

The Application decision standards for a railroad merger or consolidation application is governed by the criteria in 49 USC 11324. Because the review and approval of the proposed Acquisition is a major Federal action, the proposed Conrail Acquisition is subject to environmental review under NEPA, the Council of Environmental Quality regulations that implement NEPA compliance, and to the Board's environmental regulations in 49 CFR 1105.

As part of this environmental review, the Board requires that CSX and NS submit an application that describes, among other things, the routes and termini of the rail lines involved and their points of interchange, anticipated operating changes, and rail traffic densities on all main and secondary rail lines and yards expected to have significant increases in freight train traffic.

The analyses required to satisfy NEPA and the Board's environmental regulations at 49 CFR 1105 must originate with the traffic data generated in the Application. Consequently, SEA verified that data prior to its inclusion in the analyses conducted for the Draft Environmental Impact Statement (Draft EIS).

## A.2 STUDY AREA

SEA reviewed rail operations in 24 states, the District of Columbia, and two Canadian Provinces in which Conrail, CSX, and NS operate. SEA focused on rail line segments, rail yards, and intermodal facilities where rail traffic would meet or exceed the Board's thresholds established by the Board's regulations for environmental analysis. The essence of the proposed transaction is dividing the assets of Conrail between CSX and NS so that the two competitive railroads retain and improve operational efficiency. The Applicants determined the apportionment of rail line segments by dividing sections of main and branch rail lines into operational segments based on historic traffic patterns (see Attachment A-1). A series of maps identifying many of the segments analyzed are provided in the state-by-state discussions in Chapter 5.

As part of this transaction process, CSX and NS negotiated new trackage and haulage rights (definitions are provided below). For example, in the Cleveland area, CSX will be granted trackage rights to use the former Conrail line, that will become part of the NS system, between Cleveland and Berea if the Acquisition is approved. Trackage rights would enable CSX to access the Chicago line while NS would use the route for its Chicago traffic. The distinction between trackage and haulage rights is as follows:

**Trackage Rights.** An agreement between two railroads granting one the right to run trains over designated rail lines of the other (host railroad). It can also include the rights to interchange with other carriers at junction points and to build connections to access other carriers or shippers. Generally the host railroad is paid a fee on a per/car basis. The agreements can be perpetual or for a specific term and the fee basis periodically adjusted for factors such as changes in maintenance costs and inflation.

**Haulage Rights.** A commercial agreement between two railroads providing for the haulage of rail cars over designated rail lines of the host railroad for the account of the user railroad. Locomotive power and operating crews are provided by the host railroad. The user railroad pays a flat fee on a per car basis, the host railroad does not share any percentage of the freight revenue. Haulage agreements are generally for specific term.

### A.3 DATA SOURCES

SEA used data from a variety of sources to verify and correlate the current and projected rail traffic data related to the proposed Conrail Acquisition. The Applicants provided a significant amount of data in the primary Application. Volumes 3A and 3B of the Application list the anticipated changes in railroad operating activities. The Applicant's Environmental Report, Volumes 6A and 6B, describes the rail line segments, rail yards, and intermodal facilities that meet or exceed the Board's thresholds for environmental analysis. SEA met with Applicant representatives and evaluated the methods they used to create the Operating Plans. The Applicants then used the Operating Plans to project traffic data.

SEA also used other data sources including: employee timetables, track profiles, time vs. distance graphs (string-lines - used to establish whether commuter schedules might be affected by proposed freight train increases), passenger train schedules from Amtrak and affected commuter agencies, USGS maps, Delorme Maps, the Association of American Railroads (AAR), Railroad Atlases of North America, and Ladd Tonnage Charts.

SEA obtained several databases from the Federal Railroad Administration (FRA), including 1995 highway/rail at-grade crossing data, movable bridge data, hazardous material movement data, and train accident data. SEA conducted site visits, rode selected commuter and intercity passenger trains, and interviewed local railroad representatives to evaluate or confirm site conditions and highway/rail at-grade crossing conditions.

SEA also obtained additional rail line segment information from the Applicants for both pre- and post-Acquisition conditions including:

- Methods of train control
- FRA class of track.
- Train length.
- Rail segment length.
- Rail line segments over which passenger trains operate (obtained from Application).
- Rail line segments experiencing an increase in hazardous materials movement.
- Rail line segments over which ozone depleting materials are handled.

- Highway/rail at-grade crossings on each rail line segment that met or exceeded Board thresholds.
- Proposed grade separation/crossing warning device improvements at existing highway/rail at-grade crossings.

SEA used the information listed above to determine whether the projected change in rail activity would create an adverse impact on safety, traffic/transportation, air quality, natural resources, cultural resources, hazardous materials and waste sites, noise, land use/socioeconomics, and environmental justice issues. For example, SEA obtained the maximum operating train speeds over affected rail line segments and train speed data at highway/rail at-grade crossings to analyze rail operations safety, potential traffic delay, and the resultant impact on local air emissions (due to vehicles stopped at highway/rail at-grade crossings waiting for train traffic to clear). SEA used rail segment length data within selected counties to determine the net impact of increased pollutant emissions into the local airshed. Train densities on rail line segments where passenger trains operate, where hazardous materials cars are transported, and where roadway/rail crossing improvements are slated, have a collective impact on the overall safety of a rail line segment and were also considered in SEA's impact analysis.

#### **A.4 ANALYSIS METHODS**

##### **A.4.1 Operating Plans**

SEA met with representatives from both CSX and NS to discuss the methods used in developing the Operating Plan for each expanded railroad system following the proposed Acquisition. Prior to April 10, 1997, the date the railroads reached an agreement to jointly acquire Conrail, each railroad employed the services of an outside consultant to assist in modeling the redistribution of rail traffic to occur after the merger with Conrail. CSX retained the services of ALK, Associates from Princeton, New Jersey, and NS used MultiModal Applied Systems, Inc. of Somerset, New Jersey, to review and model their data. Following the April 10, 1997, decision to apportion Conrail, NS agreed to adopt ALK's model of Conrail's traffic distribution. The traffic flow data were adjusted to reflect the revised routing strategies employed by the joint Applicants. After review by CSX and NS personnel, the Applicants used these projections to create the Operating Plans that form the basis of the primary Application.

Generally, both railroads employed similar methods to project traffic flows and densities. ALK projected future CSX traffic levels by using 100 percent of CSX's and Conrail's 1995 waybills in a system model. MultiModal relied on a one percent waybill sample of NS car movements and integrated Conrail information from various sources, including ALK.

Modeling "rules" used by ALK<sup>1</sup> to project future traffic flows and train densities included:

1. If the origin/destination pair followed a single line haul, the model assigned the train car to that routing.
2. The model program then searched for the shortest line haul between the origin and destination.
3. The model was programmed to minimize transit time by reducing the number of switches encountered in the route. This parameter had the effect of reducing interchanges with other carriers.
4. Where all parameters were equal, the remaining traffic was distributed on a 42 percent and 58 percent basis for CSX and NS, respectively (the percentages reflect the relative portions of Conrail trackage acquired by each respective carrier).
5. Post-Acquisition traffic levels reflect truck-rail, barge-rail, and rail-rail diversions and each carrier's optimistic view of the result of increased competition.

Using the ALK model, CSX was able to "cap" the maximum number of cars handled at a yard and the maximum number of trains a rail line segment could handle. CSX assigned yards a local, regional or system designation and routed cars through the yards only when necessary. The modeling exercise indicated where yard and/or track capacity should be increased. CSX revised traffic flows to reflect these maximum limits. They assembled the resultant traffic flow information into blocks, which were assigned to the appropriate train. CSX then annualized car movement data, including empty cars returning for reloading, to establish a trains-per-day density for each rail line segment. They also estimated the gross tonnage over a rail line segment. Gross tonnage information served as a check on the number of cars that could be placed on each train.

CSX modeled general merchandise traffic into 12 service lanes (single line service between major industrial centers) using the above listed parameters and then added the different commodity groups (intermodal, bulk, automotive) to the general merchandise traffic movement. For instance, coal traffic from a particular mine was annualized then divided into the appropriate train length for a given territory to determine the number of trains per day through a particular corridor. In addition, the anticipated changes in traffic flow brought about by the western US railroad mergers was roughly accommodated by assuming that SP traffic would be routed via UP. A similar assumption was used to incorporate Burlington Northern & Santa Fe Rail Company data to reflect the effects of that merger.

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<sup>1</sup> Howard A. Rosen Verified Statement, Vol 2A of 8 p. 154-239.

NS used MultiModal to employ a similar modeling approach. NS also used the best characteristics of the current NS and Conrail Operating Plans, kept yard capacities within pre-established limits, and added the different commodity groups on top of the general merchandise traffic. Following the modeling effort, NS adjusted the results based on rail corridor impedances such as rail line capacities, crew districts, locomotive power distribution patterns, track gradients, clearances, and maintenance requirements.

With the projected traffic flows in place, the railroads estimated train and gross tonnage density per rail line segment. Those rail line segments that meet or exceed the Board's thresholds for environmental analysis were evaluated in the Environmental Report. The railroads completed the same process for rail yards and intermodal facilities.

Each service lane or corridor was linked by a series of operational segments. The railroads determined that operational segments are locations where trains could enter or depart from a segment. CSX defined all operational segments to be the equivalent of an environmental segment. NS tended to group several operational segments together to minimize the number of environmental segments to be analyzed. The railroads then averaged the traffic volume broken into trains per day and gross tonnage over the length of the segment. Attachment A-1 lists these segments; this includes the following information:

1. Reference location in Volume 3A or 3B of the primary report.
2. Internal reference number assigned by SEA.
3. Pre- and post-railroad ownership.
4. Segment station that may be a railroad location.
5. Segment length (primarily furnished by the Applicants).
6. Pre-Acquisition passenger and freight trains per day.
7. Post-Acquisition passenger and freight trains per day.
8. Difference in trains per day.
9. Pre- and post-Acquisition annual million gross tons. (Gross Ton Mile = the movement of the combined weight of rail cars and lading a distance of one mile)
10. Difference in annual million gross tons.
11. Pre- and post-Acquisition hazardous material cars transported per day.
12. Difference in hazardous material cars per day.

13. Criteria which qualified a segment for analysis.

- a. Passenger trains on a segment where freight traffic is anticipated to increase.
- b. Segment with an increase of eight trains per day, or greater than 100 percent increase in tonnage.
- c. Criteria a and b.
- d. Segment with increase of hazardous material cars per day.

**A.4.2 Train Speed**

For the highway/rail at-grade crossing analyses in the Draft EIS, SEA determined train speeds differently for the evaluation of safety and air quality impacts. To evaluate potential changes in safety at existing highway/rail at-grade crossings, SEA obtained the maximum operating speeds (MOS) for passenger and freight trains at the affected crossings from CSX, NS, and Conrail timetables and track profiles. To analyze the possible air quality effects of pollutant emissions generated by longer vehicular traffic delays, SEA also identified the typical freight train speeds through affected highway/rail at-grade crossings (see Table A-1). SEA determined, in consulting railroad personnel, that typically these speeds are slightly less than the MOS. The lower speeds are due to the fact that many trains have low horsepower per trailing ton and cannot achieve maximum operating speed. Also, nearby track curves might restrict train speed, causing trains to operate well below the maximum permitted speed. Table A-1 compares the freight MOS with the typical freight train speeds that SEA used in the Draft EIS.

**Table A-1  
Typical Freight Train Speed**

Freight Maximum Operating Speed (FMOS)	Typical Freight Train Speed (TFS)
60 mph	50 mph
50 mph	40 mph
45 mph	40 mph
40 mph	35 mph
35 mph and below	FMOS listed

**A.4.3 Train Length**

The Draft EIS uses train lengths to calculate projected changes in noise levels and highway/rail at-grade crossing safety and delays. The Applicants determined train lengths by weight averaging the four types of freight cars handled: general merchandise, automotive, intermodal

and bulk commodities like coal. Table A-2 reflects the Applicants' current and anticipated average train lengths on affected rail line segments.

**Table A-2**  
**Pre- and Post-Acquisition Train Lengths**

	Pre-Acquisition	Post-Acquisition
CR	5,600'	N/A
CSX	6,000'	6,200'
NS	4,869'	5,000'

#### **A.4.4 Method of Control**

Method of Control refers to the method of governing the movement of trains over a rail line segment. For the purposes of this analysis, SEA evaluated each rail line segment to determine whether a train movement was controlled by wayside signals or if the rail line segment was non-signalized. SEA noted further refinement of method of control such as track warrant control and centralized traffic control (CTC). Data regarding whether enhanced signal systems providing more positive protection, such as coded cab signals and automatic train stop, were in place were used in the safety analysis.

#### **A.4.5 Class of Track**

The Federal Railroad Administration (FRA) regulates the maximum speed along a track segment based on the condition of the track structure. For the safety analysis, SEA, in conjunction with the Applicants, determined the pre- and post- Acquisition FRA Class of Track for the rail line segments that met or exceeded the Board thresholds for environmental analysis, and for all rail line segments over which a passenger train operated and would experience a one train per day increase as a result of the Acquisition. Included in the safety analysis was the typical number of mainlines over the segment.

#### **A.4.6 Rail Line Segment Length**

To determine the length of each rail line segment, SEA, in conjunction with the Applicants, calculated the mileage of each segment within affected counties. SEA selected the counties to be analyzed by determining the relative level of pollutants measured within a particular county. SEA then obtained the length of each segment within a county by using a map wheel and scale. SEA measured all segments within a county affected by the proposed Acquisition. This included segments where the trains per day and/or tonnage decreased. The Applicants performed a parallel effort and submitted segment lengths based on taxation tables and GIS data. These data were compared with the mileage listed in the Applicant's Volume 6B which compiled county-specific segment length in order to perform emissions calculations.

SEA found variation in the county mileage figures. In most cases, SEA used the mileage furnished by the Applicants. Where the Applicant's mileage was inconsistent with direct-measured mileage, SEA used the measured mileage. In some instances, SEA pro-rated the mileage difference over the entire segment length.

**Attachment A-1**

**Master Table of All Rail Line Segments**





















APPENDIX A-1  
MASTER TABLE OF ALL RAIL LINE SEGMENTS

Appendix A: Rail Line Segments and Traffic Density Changes

R.R. REF.	OWNERSHIP		SEGMENT COUNT 1022				35.733	PSGR & FRT TRAIN DATA									FREIGHT RAIL DATA									CRITERIA MET									
			SEGMENT DESCRIPTION		BETWEEN	AND		SEG LENGTH (MI)	1998 BASE			POST ACQ			MILLION GROSS TONS (1)			HAZ MATERIAL CARS / DAY			FRT ANNUAL HAZ MATERIAL CARS (1)			CURRENT KEY ROUTE SEGMENTS	119	71	52	5	32	8	12				
			PRE ACQ	POST ACQ					PSGR TRN	FRT TRN	TOTAL	PSGR TRN	FRT TRN	TOTAL	Δ	1998 BASE	POST ACQ	Δ	1998 BASE	POST ACQ	Δ	1998 BASE	POST ACQ									Δ			
38 459 01	N 200	CR NS	Oak Island	NJ	Aidene	NJ	8	58	0	215	77	56	0	125	68	5	0	424	26	9	-31%	88	30	-58	32 000	10 000	-69%								
38 459 02	N 201	CR NS	Aidene	NJ	Manville	NJ	20	0	216	218	0	0	128	12	8	-90	41	6	25	8	-38%	91	32	-59	33 000	11 000	-67%								
38 459 03	N 202	CR NS	Manville	NJ	Bethlehem	PA	52	0	187	187	0	0	174	174	-13	302	24	1	-20%	75	47	-28	27 000	17 000	-37%										
38 459 04	N 203	CR NS	Bethlehem	PA	Allentown	PA	3	0	172	172	0	0	133	133	-39	248	22	8	-8%	22	31	9	8 000	11 000	38%										
38 459 05	N 204	CR NS	Allentown	PA	Burn	PA	3	0	249	249	0	0	213	213	-38	467	56	0	13%	96	91	-5	31 000	33 000	8%	x									
38 459 06	N 205	CR NS	Bethlehem	PA	Burn	PA	5	0	101	101	0	0	96	96	0	151	11	7	-23%	56	18	-38	20 000	6 000	-70%										
38 459 07	N 206	CR NS	Burn	PA	Reading Belt Jct	PA	37	0	364	364	0	0	309	309	-55	857	87	8	3%	143	108	-35	52 000	39 000	-25%	x									
38 459 08	N 207	CR NS	Reading Belt Jct	PA	WM Jct	PA	4	0	312	312	0	0	263	263	-49	582	55	7	-4%	131	80	-51	47 000	29 000	-38%	x									
38 459 09	N 208	CR NS	Oak Island	NJ	Greenville	NJ	4	0	171	171	0	0	87	87	84	229	10	1	-56%	38	25	-11	13 000	9 000	-31%										
38 459 10	N 209	CR NS	Oak Island	NJ	E Rail T V	NJ	6	0	104	104	0	0	152	152	48	151	18	4	-22%	37	56	19	13 000	20 000	54%										
38 459 11	N 210	CR NS	E Rail T V	NJ	Port Reading	NJ	6	0	57	57	0	0	60	60	03	108	8	7	-19%	38	16	-19	13 000	6 000	-54%										
38 459 12	N 211	CR NS	Port Reading	NJ	South Amboy	NJ	6	0	29	29	0	0	24	24	-05	32	1	0	-50%	10	4	-6	3 000	1 000	-67%										
38 459 13	N 212	CR NS	Bound Brook	NJ	Port Reading	NJ	15	0	24	24	0	0	51	51	-1	27	75	78	1%	19	14	-5	6 000	5 000	-17%										
38 459 14	N 213	CR NS	Phillipsburg	NJ	Dover	PA	47	0	11	11	0	0	14	14	03	06	0	0	-17%	0	0	0	0	0	0										
38 459 15	N 214	CR NS	Hazleton	PA	Lehighton	PA	29	0	14	14	0	0	14	14	00	04	0	0	0	0	0	0	0	0	0										
38 459 16	N 215	CR NS	Lehighon	PA	Allentown	PA	29	0	57	57	0	0	43	43	14	82	4	1	-50%	8	8	0	2 000	2 000	0%										
38 459 17	N 216	CR NS	Lehighon	PA	Reading Belt Jct	PA	2	0	60	60	0	0	49	49	-1	85	12	4	-8%	13	28	15	4 000	10 000	150%	x									
38 459 18	N 217	CR NS	West Falls	PA	Abrams	PA	14	0	173	173	0	0	140	140	-33	249	28	0	-24%	80	44	-16	21 000	18 000	-24%	x									
38 459 19	N 218	CR NS	West Falls	PA	Abrams	PA	39	0	251	251	0	0	274	274	-23	508	44	1	-15%	107	70	-37	39 000	25 000	-36%	x									
38 459 20	N 219	CR NS	Mountville	PA	Abrams	PA	32	0	77	77	0	0	103	103	28	113	12	0	6%	42	23	-19	15 000	8 000	-47%										
38 459 21	N 220	CR NS	Earnest	PA	Coatsville	PA	29	0	14	14	0	0	14	14	00	14	1	7	21%	0	0	0	0	0	0										
38 459 22	N 221	CR NS	West Falls	PA	Wayne Jct	PA	4	0	73	73	0	0	40	40	-33	143	24	0	-83%	32	4	-28	11 000	1 000	-91%										
38 459 23	N 222	CR NS	Zoo	PA	Arsenal	PA	2	0	54	54	0	0	93	93	39	71	14	7	107%	5	24	19	1 000	8 000	700%										
38 459 24	N 223	CR NS	Arsenal	PA	Greenwich	PA	3	0	54	54	0	0	69	69	15	71	65	0	-8%	5	2	-3	1 000	0	-100%										
38 459 25	N 224	CR NS	Eastwick	PA	Marion Hook	PA	12	0	30	30	0	0	78	78	48	70	11	7	87%	15	23	8	5 000	8 000	60%										
38 459 26	N 225	CR NS	CSX Park Jct	PA	Frankford Jct	PA	5	0	47	47	0	0	61	61	14	129	83	0	-36%	37	18	-19	13 000	6 000	-54%										
38 459 27	N 226	CR NS	Frankford Jct	PA	Pavonia	NJ	4	28	47	327	280	57	337	10	188	142	-24	36	18	-18	13 000	6 000	-54%												
38 460 01	N 226	CR NS	Paulsboro	NJ	Carneys Pt	NJ	16	0	17	17	0	0	17	17	00	22	12	45%	4	2	-2	1 000	0	-100%											
38 460 02	N 232	CR NS	Bulson St	NJ	Cynslow Jct	NJ	23	0	17	17	0	0	08	08	-11	17	0	7	-59%	1	0	-1	0	0											
38 460 03	N 233	CR NS	Winslow Jct	NJ	Palermo Coal	NJ	34	0	03	03	0	0	03	03	00	11	04	64%	1	0	-1	0	0												
38 460 04	N 234	CR NS	Pavonia	NJ	Burlington	NJ	15	0	14	14	0	0	14	14	00	10	06	40%	4	2	-2	1 000	0	-100%											
38 460 14	N 241	CR NS	Newark	DE	Harrington	DE	56	0	31	31	0	0	45	45	14	83	70	11%	11	12	1	4 000	4 000	0%											
38 460 15	N 242	CR NS	Harrington	DE	Pocomoke	DE	64	0	12	12	0	0	14	14	02	17	16	8%	3	3	0	1 000	1 000	0%											
38 460 16	N 243	CR NS	Harrington	DE	Indian River Coal	DE	43	0	09	09	0	0	09	09	00	27	29	7%	0	0	0	0	0	0											
38 460 17	N 244	CR NS	Wayne	NJ	Crofton	NJ	19	0	06	06	0	0	09	09	03	08	09	13%	0	0	0	0	0	0											
38 460 21	N 245	CR NS	Port Jervis	NY	Binghamton	NY	126	0	78	79	0	0	120	120	41	115	194	69%	1	50	49	0	18 000	100%											
38 460 22	N 246	CR NS	Binghamton	NY	Waverly	NY	42	0	130	130	0	0	199	199	69	191	280	47%	1	50	49	0	18 000	100%											
38 460 23	N 247	CR NS	Waverly	NY	Coming	NY	36	0	164	164	0	0	214	214	50	225	311	38%	2	52	50	0	18 000	100%											
38 460 24	N 248	CR NS	Waverly	NY	Mehoparty	PA	59	0	15	15	0	0	15	15	00	09	09	0%	1	1	0	0	0	0											
38 460 25	N 248	CR NS	Wayne	PA	Ludlowville Coal	NY	49	0	20	20	0	0	3	13	07	24	22	85%	0	0	0	0	0	0											
38 460 26	N 248	CR NS	Wayne	PA	Enola	PA	5	0	237	237	0	0	184	184	53	88	1	46%	66	51	-15	24 000	18 000	-25%	x										
38 460 27	N 248	CR NS	Wayne	PA	Enola	PA	18	0	193	193	0	0	129	129	64	48	0	34	28	8	-28%	34	28	-6	12 000	10 000	-17%	x							
38 460 28	N 250	CR NS	Enola	PA	Wago Yorkhaven	PA	58	0	160	160	0	0	141	141	-19	403	315	-22%	34	29	-5	12 000	10 000	-17%	x										
38 460 29	N 252	CR NS	Wago Yorkhaven	PA	Perryville	PA	10	0	17	17	0	0	11	11	08	20	19	-5%	1	1	0	0	0	0											





**APPENDIX A-1  
MASTER TABLE OF ALL RAIL LINE SEGMENTS**

Appendix A - Rail Line Segments and Traffic Density Changes

RR REF	BEG ID	OWNERSHIP		SEGMENT COUNT 1022			35 733	PSGR & FRT TRAIN DATA										FREIGHT RAIL DATA						CRITERIA MET																	
		PRE ACQ	POST ACQ	SEGMENT DESCRIPTION				BEG LENGTH (MI)	1999 BASE			POST ACQ			MILLION GROSS TONS (1)			HAZ MATERIAL CARR / DAY			EST ANNUAL HAZ MATERIAL CARR (1)			28	19	7	8	9	10	11	12										
				BETWEEN	AND	PSGR TRN			FRT TRN	TOTAL	PSGR TRN	FRT TRN	TOTAL	Δ	1999 BASE	POST ACQ	Δ	1999 BASE	POST ACQ	Δ	1999 BASE	POST ACQ	Δ																		
N 407 10	N-415	NS	NS	Louisville	KY	SJ Jct	KY	87	0.0	13.7	13.7	0.0	11.2	11.2	-2.5	24.8	23.3	-1.5	41	44	3	14,000	10,000	14%	x																
N 407 11	N-416	NS	NS	Louisville	KY	E St Louis	IL	263	0.0	11.8	11.8	0.0	11.7	11.7	-0.1	21.0	19.9	-1.1	38	27	-11	13,000	9,000	-31%	x																
N 407 12	N-417	NS	NS	Norfolk	VA	Burkeville	VA	138	0.0	20.4	20.4	0.0	21.5	21.5	1.1	65.1	65.2	0.1	14	12	-2	5,000	4,000	-20%																	
N 407 13	N-418	NS	NS	Burkeville	VA	Pamplin	VA	37	0.0	11.4	11.4	0.0	11.8	11.8	0.2	18.4	18.3	-0.1	5	2	-3	1,000	0	-100%																	
N 407 14	N-418	NS	NS	Pamplin	VA	Roanoke	VA	85	0.0	18.3	18.3	0.0	18.9	18.9	0.8	28.3	32.1	3.8	18	13	-5	8,000	4,000	-50%																	
N 407 15	N-420	NS	NS	Roanoke	VA	Salem	VA	7	0.0	34.3	34.3	0.0	40.4	40.4	6.1	70.8	84.9	14.1	32	41	9	11,000	14,000	27%																	
N 407 16	N-421	NS	NS	Salem	VA	Walton	VA	33	0.0	28.2	28.2	0.0	32.1	32.1	3.9	52.1	56.9	4.8	30	40	10	10,000	14,000	40%	x																
N 407 17	N-422	NS	NS	Walton	VA	Narrows	VA	30	0.0	21.0	21.0	0.0	21.0	21.0	0.0	38.3	32.6	-5.7	18	16	-2	5,000	5,000	0%																	
N 407 18	N-423	NS	NS	Narrows	VA	Kellysville	WV	11	0.0	34.1	34.1	0.0	35.4	35.4	1.3	104.6	108.9	4.3	34	17	-17	12,000	5,000	-50%																	
N 407 19	N-424	NS	NS	Kellysville	WV	Bluefield	WV	22	0.0	31.9	31.9	0.0	31.6	31.6	-0.3	98.8	96.3	-2.5	33	17	-16	12,000	6,000	-50%																	
N 407 20	N-425	NS	NS	Ablens	VA	Pamplin	VA	18	0.0	3.9	3.9	0.0	3.9	3.9	0.0	6.5	5.4	-1.1	5	3	-2	1,000	1,000	0%																	
N 407 21	N-426	NS	NS	Burkeville	VA	Altavista	VA	78	0.0	9.8	9.8	0.0	11.0	11.0	1.2	50.4	52.2	1.8	14	15	1	5,000	5,000	0%																	
N 407 22	N-427	NS	NS	Altavista	VA	Tinkers Crk Conn	VA	41	0.0	10.0	10.0	0.0	8.4	8.4	-1.6	59.3	55.8	-3.5	19	4	-15	6,000	1,000	-83%																	
N 407 23	N-428	NS	NS	Tinkers Crk Conn	VA	Salem	VA	13	0.0	7.8	7.8	0.0	7.7	7.7	-0.1	47.3	50.9	3.6	16	0	-16	5,000	0	-100%																	
N 407 24	N-429	NS	NS	Salem	VA	Narrows	VA	68	0.0	12.0	12.0	0.0	13.5	13.5	1.5	84.0	74.5	-9.5	17	2	-15	6,000	0	-100%																	
N 407 25	N-430	NS	NS	Burkeville	VA	West Point	VA	91	0.0	1.9	1.9	0.0	1.7	1.7	-0.2	2.4	2.6	0.2	2	2	0	0	0	0																	
N 407 26	N-431	NS	NS	Petersburg	VA	Hopewell	VA	9	0.0	2.4	2.4	0.0	2.0	2.0	-0.4	3.2	3.0	-0.2	10	9	-1	3,000	3,000	0%																	
N 407 27	N-432	NS	NS	Poe ML	VA	Petersburg	VA	3	0.0	8.4	8.4	0.0	8.0	8.0	-0.4	16.4	12.3	-4.1	21	32	11	7,000	11,000	57%	x																
N 407 28	N-433	NS	NS	Suffolk	VA	Edgerton	VA	71	0.0	1.7	1.7	0.0	1.1	0.8	-0.3	3.1	3.1	0.0	0	0	0	0	0	0																	
N 407 29	N-434	NS	NS	S Roanoke	VA	Bellevue Crk Jct	NC	99	0.0	7.0	7.0	0.0	7.9	7.9	0.9	17.8	17.8	0.0	5	3	-2	1,000	1,000	0%																	
N 407 30	N-435	NS	NS	Bellevue Crk Jct	NC	Winston Salem	NC	23	0.0	5.6	5.6	0.0	3.7	3.7	-1.9	12.7	8.3	-4.4	3	3	0	1,000	1,000	0%																	
N 407 31	N-436	NS	NS	Winston Salem	NC	Greensboro	NC	26	0.0	4.7	4.7	0.0	2.7	2.7	-2.0	6.4	5.8	-0.6	6	3	-3	2,000	1,000	-50%																	
N 407 32	N-437	NS	NS	Bellevue Crk Jct	NC	Bellevue Crk Cl	NC	4	0.0	2.3	2.3	0.0	2.7	2.7	0.4	7.2	8.2	1.0	0	0	0	0	0	0																	
N 408 01	N-438	NS	NS	Kinney Yd	VA	Brookneal	VA	32	0.0	1.7	1.7	0.0	2.1	2.1	0.4	2.0	2.5	0.5	0	0	0	0	0	0																	
N 408 02	N-439	NS	NS	Vetbrook	VA	Mayo Jct	NC	39	0.0	3.7	3.7	0.0	4.4	4.4	0.7	10.8	12.8	2.0	0	0	0	0	0	0																	
N 408 03	N-440	NS	NS	South Boston	VA	Clover	VA	16	0.0	0.8	0.8	0.0	0.8	0.8	0.0	1.3	1.7	0.4	0	0	0	0	0	0																	
N 408 04	N-441	NS	NS	Kimballton	VA	Norcross	VA	2	0.0	1.4	1.4	0.0	2.9	2.9	1.5	1.2	1.8	0.6	4	4	0	1,000	1,000	0%																	
N 408 05	N-442	NS	NS	Elkton	VA	Hartsonburg	VA	20	0.0	1.8	1.8	0.0	2.8	2.8	1.0	2.8	2.8	0.0	1	1	0	0	0	0																	
N 408 06	N-443	NS	NS	Bluefield	VA	Jager	WV	58	0.0	27.7	27.7	0.0	28.7	28.7	1.0	83.5	84.1	0.6	30	17	-13	10,000	6,000	-40%																	
N 408 07	N-444	NS	NS	Jager	WV	Whamcliffe	WV	18	0.0	35.1	35.1	0.0	35.4	35.4	0.3	101.1	101.7	0.6	30	17	-13	10,000	6,000	-40%																	
N 408 08	N-445	NS	NS	Whamcliffe	WV	Williamson	WV	32	0.0	38.0	38.0	0.0	38.8	38.8	0.8	99.7	100.2	0.5	30	17	-13	10,000	6,000	-40%																	
N 408 09	N-446	NS	NS	Williamson	WV	Wolf Creek	WV	18	0.0	33.7	33.7	0.0	35.8	35.8	1.9	93.0	93.7	0.7	30	18	-12	10,000	6,000	-40%																	
N 408 10	N-447	NS	NS	Wolf Creek	WV	Kenova	OH	55	0.0	24.5	24.5	0.0	26.3	26.3	1.8	67.8	67.0	-0.8	30	18	-12	10,000	6,000	-40%																	
N 408 11	N-448	NS	NS	Kenova	OH	Faigrounds (Colum	OH	130	0.0	21.1	21.1	0.0	23.3	23.3	2.2	52.7	53.2	0.5	38	24	-14	13,000	8,000	-38%																	
N 408 12	N-449	NS	NS	Bluefield	VA	Cedar Bluff	VA	34	0.0	6.7	6.7	0.0	8.9	8.9	0.2	15.8	18.8	3.0	0	0	0	0	0	0																	
N 408 13	N-450	NS	NS	Cedar Bluff	VA	St Paul	VA	42	0.0	11.1	11.1	0.0	10.4	10.4	-0.7	27.6	28.4	0.8	0	0	0	0	0	0																	
N 408 14	N-451	NS	NS	St Paul	VA	Norton	VA	22	0.0	8.4	8.4	0.0	5.4	5.4	-1.0	17.3	16.5	-0.8	0	0	0	0	0	0																	
N 408 15	N-452	NS	NS	Norton	VA	Ramsey	VA	5	0.0	3.5	3.5	0.0	2.9	2.9	-0.6	7.8	7.6	-0.2	0	0	0	0	0	0																	
N 408 16	N-453	NS	NS	Weller	VA	Richlands	VA	46	0.0	4.1	4.1	0.0	4.2	4.2</																											

APPENDIX A-1  
MASTER TABLE OF ALL RAIL LINE SEGMENTS

Appendix A. Rail Line Segments and Traffic Density Changes

ER REF	OWNERSHIP		SEGMENT COUNT 1022				35 733	PSOR & FRY TRAIN DATA												FREIGHT RAIL DATA						CRITERIA MET					
								1996 BASE		POST ACQ		MILION GROSS TONS (T)		HAZ MATERIAL CARS (CAY)		FRT ANNUAL HAZ MATERIAL CARS (H)		CURRENT NET ROUTE SEGMENTS	T19	T11	T12	T13	T14	T15	T16						
								PSOR TRN	FRY TRN	TOTAL	PSOR TRN	FRY TRN	TOTAL	Δ	1996 BASE	POST ACQ	Δ									1996 BASE	POST ACQ	Δ	1996 BASE	POST ACQ	Δ
								BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER									BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER
SEG ID	PRE ACQ	POST ACQ	SEGMENT DESCRIPTION		BEETWEEN	AND	SEG LENGTH (MI)	PSOR TRN	FRY TRN	TOTAL	PSOR TRN	FRY TRN	TOTAL	Δ	1996 BASE	POST ACQ	Δ	1996 BASE	POST ACQ	Δ	1996 BASE	POST ACQ	Δ	NEW NET ROUTE	NEW MAJOR NET ROUTE						
36 409 28	N-463	NS	NS	Homeslead	OH	Oak Harbor	OH	20	0.0	8.6	8.6	0.0	4.4	4.4	2.2	16.8	6.3	-44%	0	8	-1	3,000	2,000	-33%							
36 469 30	N-464	NS	NS	Rt Wayne	IN	Muncie	IN	64	0.0	19.6	19.6	0.0	15.0	15.0	-4.6	28.6	21.5	-25%	41	27	-14	14,000	8,000	-36%	x						
36 470 01	N-465	NS	NS	Muncie	IN	Ivorydale	OH	106	0.0	20.8	20.8	0.0	20.5	20.5	-0.3	34.4	40.9	16%	42	67	25	15,000	24,000	60%	s						
36 470 02	N-466	NS	NS	Vera	OH	Sardena	OH	57	0.0	3.4	3.4	0.0	0.0	0.0	-3.4	5.7	0.0	100%	4	0	-4	1,000	0	-100%							
36 470 03	N-467	NS	NS	Sardena	OH	Norwood	OH	43	0.0	3.4	3.4	0.0	1.7	1.7	-1.7	5.7	0.3	-95%	4	0	-4	1,000	0	-100%							
36 470 04	N-468	NS	NS	Norwood	OH	Ivorydale	OH	5	0.0	3.4	3.4	0.0	2.0	2.0	-1.4	5.7	1.6	-72%	4	0	-4	1,000	0	-100%							
36 470 05	N-469	NS	NS	Lafayette Jct	IN	Alexandria	IN	67	0.0	3.0	3.0	0.0	4.8	4.8	1.8	5.7	7.8	47%	1	2	1	0	0	0%							
36 470 06	N-470	NS	NS	Gibson City	IL	Bement	IL	41	0.0	5.4	5.4	0.0	7.0	7.0	1.6	11.0	18.4	49%	13	20	7	4,000	7,000	75%		x					
36 470 07	N-481	NS	NS	Gibson City	IL	E Peoria	IL	72	0.0	3.1	3.1	0.0	0.9	0.9	-2.2	4.0	2.8	-35%	8	5	-3	2,000	1,000	-50%							
36 470 08	N-492	NS	NS	Decatur	IL	Taylorville	IL	30	0.0	6.7	9.1	0.0	16.7	16.7	7.0	16.0	19.9	24%	17	21	4	6,000	7,000	17%		x					
36 470 09	N-493	NS	NS	Granite City	IL	E St Louis	IL	1	0.0	18.9	18.9	0.0	18.8	18.8	0.1	18.8	14.8	-20%	26	25	-1	9,000	9,000	0%							
36 470 10	N-494	NS	NS	E St Louis	IL	Luther	MO	6	0.0	20.8	20.8	0.0	22.0	22.0	1.2	20.1	24.2	20%	29	24	-5	9,000	8,000	-11%							
36 470 11	N-495	NS	NS	Luther	MO	Moberly	MO	141	0.0	10.2	10.2	0.0	11.4	11.4	1.2	13.8	14.4	4%	9	8	-1	3,000	2,000	-33%							
36 470 12	N-496	NS	NS	Coalton Coal	IL	CAN Madison	IL	53	0.0	0.8	0.8	0.0	0.7	0.7	0.1	1.9	1.9	0%	0	0	0	0	0	0%							
36 482 249	N-497	CR	NS	Kalamazoo	MI	Porter	IN	67	8.0	0.7	8.7	8.0	7.0	15.0	6.3	7.8	20.4	162%	0	0	0	0	0	0%							
36 470 09	N-498	NS	NS	IC 35th St	IL	Gibson City	IL	69	4.0	2.0	6.0	4.0	5.2	9.2	5.2	5.6	13.8	146%	20	10	-10	7,000	3,000	-57%							
36 498 8	N-499	NS	NS	Calumet	IL	Landers	IL	8	0.0	23.2	23.2	0.0	18.0	18.0	-5.2	32.7	9.4	-99%	43	57	14	15,000	20,000	33%							
36 490 48	S-001	AMTK	AMTK	Davis	DE	Perryville	MD	21	73.0	4.5	77.5	73.0	12.4	85.4	7.9	25.8	44.8	74%	43	48	5	15,000	17,000	13%							
36 490 50	S-010	AMTK	AMTK	Baltimore	MD	Bowie	MD	29	117.0	2.4	119.4	117.0	7.7	124.7	5.3	24.7	36.7	46%	1	10	9	3,000	100%								
36 490 51	S-011	AMTK	AMTK	Bowie	MD	Lendover	MD	8	117.0	3.2	120.2	117.0	9.3	126.3	6.1	28.5	43.0	51%	1	10	9	3,000	100%								
36 490 13	S-020	CR	SHARED	Carlton	MI	Ecorse	MI	20	0.0	2.0	2.0	0.0	11.2	11.2	9.2	0.5	14.5	2802%	0	3	3	0	1,000	100%							
36 490 06	S-021	CR	SHARED	West Detroit	MI	North Yard	MI	7	0.0	7.9	7.9	0.0	13.2	13.2	5.3	6.2	13.6	116%	9	10	1	3,000	3,000	0%							
36 490 14	S-022	CR	SHARED	West Detroit	MI	Delray	MI	2	0.0	12.7	12.7	0.0	16.5	16.5	3.8	11.4	17.5	53%	10	10	0	3,000	3,000	0%							
36 490 43	S-030	AMTK	AMTK	Lans	NJ	Union	NJ	7	277.0	3.4	280.4	277.0	11.0	288.0	7.6	58.6	75.6	29%	17	25	8	6,000	9,000	50%							
36 490 45	S-031	AMTK	AMTK	Midway	NJ	Montville	PA	17	175.0	3.4	178.4	175.0	11.0	186.0	7.6	37.2	54.2	46%	9	15	6	3,000	5,000	67%							
36 490 21	S-032	CR	SHARED	PH	NJ	Bayway	NJ	9	0.0	10.9	10.9	0.0	16.2	16.2	5.3	10.0	16.2	62%	29	62	33	10,000	22,000	120%							
36 490 44	S-033	AMTK	AMTK	Union	NJ	Midway	NJ	22	189.0	3.4	192.4	189.0	11.0	200.0	7.6	41.4	58.4	41%	18	24	6	6,000	8,000	33%							
36 490 47	S-040	AMTK	AMTK	Arsenal	PA	Davis	DE	25	133.0	2.3	135.3	133.0	10.5	143.5	5.2	28.4	46.4	63%	36	48	12	13,000	17,000	31%							
36 490 46	S-041	AMTK	AMTK	Mortsville	PA	Zoo	PA	29	145.0	3.4	148.4	145.0	7.1	152.1	11.1	32.0	41.2	25%	12	23	11	4,000	8,700	100%							
36 440 30	S-042	CR	SHARED	South Philadelphia	PA	Fland	PA	5	0.0	6.2	6.2	0.0	21.1	21.1	12.4	6.3	25.5	303%	3	21	18	1,000	7,000	600%							
36 490 01	S-200	CR	SHARED	W Brownsville	PA	Waynesburg	PA	28	0.0	19.0	19.0	0.0	19.0	19.0	0.0	46.8	46.8	0%	0	0	0	0	0	0%							
36 490 02	S-201	CR	SHARED	W Brownsville	PA	Catawba Jct	PA	66	0.0	5.6	5.6	0.0	7.4	7.4	1.8	6.0	6.0	33%	1	1	0	0	0	0%							
36 490 03	S-202	CR	SHARED	Catawba Jct	PA	Lovetts Mine	WV	13	0.0	3.8	3.8	0.0	3.8	3.8	0.0	6.0	6.0	0%	0	0	0	0	0	0%							
36 490 04	S-203	CR	SHARED	Waynesburg	PA	Wana	PA	19	0.0	6.4	6.4	0.0	6.4	6.4	0.0	20.5	23.5	0%	0	0	0	0	0	0%							
36 490 05	S-204	CR	SHARED	Wana	PA	Clif	PA	2	0.0	3.4	3.4	0.0	3.4	3.4	0.0	5.8	5.8	0%	0	0	0	0	0	0%							
36 490 06	S-205	CR	SHARED	Clif	PA	Blacksville	PA	5	0.0	3.4	3.4	0.0	3.4	3.4	0.0	3.8	3.8	0%	0	0	0	0	0	0%							
36 490 07	S-206	CR	SHARED	Waynesburg	PA	Bailey	PA	15	0.0	10.2	10.2	0.0	10.2	10.2	0.0	24.4	24.4	0%	0	0	0	0	0	0%							
36 490 08	S-207	CR	SHARED	Clif	PA	Federal	PA	6	0.0	1.8	1.8	0.0	1.8	1.8	0.0	5.8	5.8	0%	0	0	0	0	0	0%							
36 490 09	S-208	CR	SHARED	North Yard	MI	Ulrich	MI	17	0.0	8.3	8.3	0.0	9.9	9.6	1.3	5.8	5.7	-2%	4	4	0	1,000	1,000	0%							
36 490 10	S-209	CR	SHARED	Delray	MI	Trenton	MI	10	0.0	14.8	14.8	0.0	16.5	16.5	1.7	27.9	24.0	-14%	9	9	0	3,000	3,000	0%							
36 490 11	S-210	CR	SHARED	West Detroit	MI	Dearborn	MI	5	8.0	1.6	7.6	8.0	3.4	9.4	1.8	3.2	3.2	0%	4	4	0	4,000	0	-100%							
36 490 12	S-211	CR	SHARED	Nave	NJ	N Bergen	NJ	8	0.0	4.4	4.4	0.0	1.4	1.4	-3.0	12.7	0.4	-97%	20	55	35	7,000	20,000	186%							
36 490 13	S-212	CR	SHARED	N Bergen	NJ	Ridgefield Hts	NJ	6	0.0	23.1	23.1	0.0	22.1	22.1	-1.0	40.5	42.1	4%	60	87	27	21,000	31,000	48%	x						
36 490 14	S-213	CR	SHARED	Aldene	NJ	High Bridge	NJ	39	56.0	1.6	57.6	56.0	1.6	57.6	0.0	13.0	13.0	0%	0	0	0	0	0	0%							
36 490 15	S-214	NJT	SHARED	Union	NJ	Red Bank	NJ	16	88.0	1.8	89.8	88.0	1.8	89.8	0.0	13.0	13.0	0%	0	0	0	0	0	0%							
36 490 16	S-215	CR	SHARED	Red Bank	NJ	Lakehurst	NJ	29	0.0	1.6	1.6	0.0	1.6	1.6	0.0	0.2	0.2	0%	0	0	0	0	0	0%							
36 490 17	S-216	CR	SHARED	CQ	NJ	Minmouth Jct	NJ	19	0.0	3.4	3.4	0.0	3.4	3.4	0.0	3.4	0.2	0%	0	0	0	0	0	0%							
36 490 18	S-217	CR	SHARED	Bayway	NJ	PD	NJ	6	0.0	6.0	6.0	0.0	7.7	7.7	1.7	7.0	10.3	47%	18	24	6	5,000	8,000	33%							
36 490 19	S-218	CR	SHARED	PD	NJ																										



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**APPENDIX B**  
**Safety**

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## APPENDIX B SAFETY

In June 1997, CSX Corporation (CSX) and Norfolk Southern Corporation (NS), together with Conrail Inc., filed a joint application with the Surface Transportation Board (Board) seeking authority for CSX and NS to acquire control of Conrail. As part of this Acquisition, CSX and NS would divide Conrail's assets between the two companies. The proposed transaction involves over 44,000 miles of rail lines and related facilities extending over a large portion of the eastern United States. CSX and NS have stated that the transaction would increase service capabilities, improve operating efficiency, and promote competition.

The proposed transaction would result in a rerouting of train traffic that would generate increases and decreases in traffic along some rail line segments and in some rail yards. The proposed diversion of highway truck shipments to the expanded CSX and NS systems could result in increased local truck traffic in and around intermodal facilities and a corresponding decrease in long-haul truck traffic. In addition, the rerouting and consolidation activities associated with the proposed Acquisition would involve some rail line abandonment and construction projects and expansion of some rail yards and intermodal facilities.

The Board's Section of Environmental Analysis (SEA) has prepared an Environmental Impact Statement (EIS) to evaluate potential impacts that may result from the proposed Acquisition. As part of the EIS preparation process, a multi-disciplinary team conducted a comprehensive analysis of impacts to safety, traffic and transportation, energy, air quality, noise, cultural resources, hazardous materials, natural resources, land use/socioeconomics, and environmental justice. This Appendix focuses on SEA's approach to safety issues, including:

- Rail operations for freight, intercity passenger and commuter trains.
- Vehicle traffic safety at highway/rail at-grade crossings.
- The potential release of hazardous materials during rail transportation including hazardous materials handling at classification yards and intermodal terminals.

### B.1 OVERVIEW

The safety evaluation for rail operations focuses on freight train accidents and passenger train accidents, both intercity and commuter trains. The methods for estimating the potential freight and passenger train safety effects are presented in Sections B.4.1 and B.4.2, respectively. The methods for estimating the potential effects from train/vehicle accidents at highway/rail at-grade crossings is addressed in Section B.4.3. The methods to assess potential safety-related effects resulting from hazardous materials transportation is addressed in Section B.4.4.

## **B.2 REGULATORY REQUIREMENTS**

### **Federal Railroad Administration**

SEA performed analyses in accordance with the Board's regulations in 49 CFR 1105.7 (e)(2), which requires a description of the safety effects of the Acquisition on the local, regional, and national transportation system. The Federal Railroad Administration (FRA) is the Federal agency with plenary authority over the safety of the railroad industry. FRA has regulatory and enforcement powers found in 49 CFR Parts 200 through 240. FRA rules fall within three general categories: procedural; safety; and financial assistance. The principal safety topics are as follows:

**Track and Bridge Safety Standards (Part 214)**. Railroad track maintenance and employee safety standards as set forth in FRA rules 49 CFR Parts 213 and 214. The rules establish standards for the following items:

- Roadbed - Drainage and vegetation.
- Track Geometry - Gauge, alignment, super-elevation on curves and speed limitations.
- Track Structure - Ballast, crossties, defective rails, rail joints, tie plates, switches, turnouts, rail-end mismatch, etc.
- Inspection - Track, switch and track crossing, rail; and inspection records.
- Bridge - Employee safety.
- Roadway Workers - Employee safety.
- Classes of track and operating speed limits - Minimum maintenance and inspection standards established for six classes of track structure associated with maximum allowable operating speed as shown on Table B-1.

**Railroad Signal Systems (Parts 233-236)**. The rules establish design and inspection standards for signal system reporting requirements and grade crossing signal system safety, instructions for discontinuance of a signal system, and installation and maintenance standards for a signal system.

**Table B-1**  
**Maximum Operating Speeds by Class of Track**

Track Class	Maximum Allowable Freight Train Speed (miles per hour)	Maximum Allowable Passenger Train Speed (miles per hour)
1	10	15
2	25	30
3	40	60
4	60	80
5	80	90
6	110	110

**Railroad Power Brakes, Safety Appliances and Locomotive and Freight Car Safety Standards (Parts 210, 215-216, 223, 229-232).** Locomotive and freight car safety rules define defective parts such as freight car wheels, air brake systems, axles, roller bearings, trucks, couplers, and passenger and freight car bodies. Car component and train inspection procedures and intervals are also set forth in the rules. Standards for locomotive safety cover items such as brakes, suspension, electrical systems, internal combustion equipment, cabs, cab equipment, and periodic inspections and tests.

**Railroad Operating Rules and Practices (Parts 217-221, 225-228, 240).** FRA railroad operating rules and practices require that railroads establish a program of operational tests, inspections, record keeping, and instruction on operating rules. Control of alcohol and drug use, hours of service, safety and enforcement procedures are also addressed.

The FRA does not regulate track capacity, per se. Railroads may run any number of trains on a track so long as the operation is in conformance with all FRA regulations. The railroads determine whether or not the track can efficiently handle the number of trains to be operated. This determination is usually based on the amount of delay that can be tolerated on a particular rail line segment.

### **Other Regulations**

Many of the states affected by the proposed Acquisition have legal clearance requirements along rail lines for track centers, bridges, tunnels, platforms, and signals. States that have implemented these regulations have done so to provide safe working conditions for rail workers primarily involved with train operations such as switchmen and brakemen. The appropriate state agency promulgated these requirements working with railroad employees having first-hand experience along the rail lines.

## **B.2.1 Regulatory Requirements for Rail Transport of Hazardous Materials**

### **Surface Transportation Board**

The Surface Transportation Board Manual and 49 CFR 1105.7(e)(7) requires the railroads to identify the following information if they expected that hazardous materials will be transported:

1. Materials and quantity.
2. Frequency of service.
3. Whether chemicals are being transported that, if mixed, could react to form more hazardous compounds.
4. Safety practices (including any speed restrictions).
5. Applicant's safety record (to the extent available) on derailments, accidents, and hazardous spills.
6. Contingency plans to deal with accidental spills.
7. Likelihood of an accidental release of hazardous materials.

### **Other Regulations**

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), reference 40 CFR Parts 305 and 306, directed the EPA to investigate uncontrolled or abandoned hazardous waste sites for priority remediation under the Superfund Program by establishing a National Priority List (NPL).

The Resource Conservation and Recovery Act of 1976 (RCRA), reference 40 CFR Parts 264 and 265, called for the EPA to compile a listing of facilities that generate, transport, store, treat, or dispose of hazardous waste.

The FRA has a number of regulations specifically applicable to the rail transport and handling of hazardous materials, notably 49 CFR Parts 171, 172, 173, 178, 179, 180, and 185. The FRA also has a series of regulations at 49 CFR Parts 200-399 that require minimum safety standards for the construction and maintenance of track, rolling stock and signal systems as well as operating rules. These regulations, and others in these Parts, provide assurances that the railroad will conduct operations in a safe manner and minimize the probability of a train accident that may cause the release of a hazardous materials.

### **B.3 DATA SOURCES AND TYPES**

Conrail, CSX, NS, the FRA, and the Association of American Railroads (AAR) provided the data used to evaluate safety effects of the proposed Conrail Acquisition. The three railroads supplemented clarifying information about specific rail lines and yards and terminals, either directly or from the information presented in the Application. Most of the information from the Application was contained in Volumes 3A and 3B of 8, the Operating Plans. SEA obtained FRA data from the FRA's databases of Train Accident/Incident Reports, and from annual summaries thereof published as annual Bulletins. This reporting system has been in place for many years, actually preceding the existence of the FRA, and represents, in general and in the aggregate, an excellent source of consistent accident data. The AAR data are contained in a document titled, "Analysis of Class 1 Railroads, 1996."

#### **B.3.1 Data Types and Sources for Freight Rail Operations**

In its determination of the safety effects of highway truck diversions due to the proposed Acquisition, SEA used preliminary 1995 data published by the USDOT Bureau of Transportation (BOT) in its 1997 edition of National Transportation Statistics. NS used 1994 accident rates published by the USDOT National Highway Safety Administration (NHTSA) to generate their accident reduction estimates.

The BOT uses NHTSA as the source of heavy truck accident rate information. There are differences between the personal injury and fatality rates. For injury rate, the 1994 NHTSA rates are higher than the 1995 BOT rate (.55 million VMT versus .17 / million VMT). For the fatality rate, the NHTSA 1994 value of .027/million VMT is two-thirds the 1995 BOT rate of .04/million VMT. These personal injury and fatality rate differences are also present when comparing annual rates between 1990 and 1994.

#### **B.3.2 Data Types and Sources for Highway/Rail At-Grade Crossings**

SEA used the latest version of the FRA database to compile accident data for all crossings with at least one accident in the last five years for the identified states and counties. This data included the following attributes for analysis:

- State.
- County.
- FRA crossing identification number.
- Number of trains.
- Average daily vehicular traffic.

- Types of highway/rail at-grade crossing warning devices.
- Number of accidents.

### **B.3.3 Data Types and Sources for Rail Transport of Hazardous Materials**

The United States Department of Transportation (DOT) Hazardous Materials Incident Reporting System (HMIRS) data and reports summarize the frequency, size, and nature of previously reported incidents. SEA examined and summarized previously published analyses of specific hazardous materials transportation concerns, including chemicals and nuclear materials. Examples include the *Waste Isolation Pilot Plant Disposal Phase Draft Supplemental Environmental Impact Statement* (DOE 1996), Alexeeff, et al. (1994) and Lindell and Perry (1997). SEA studied railroad and state and local contingency plans to gain an understanding of how the railroads and government authorities would work to limit the consequences of any accident involving hazardous materials transportation. SEA examined specifications for containers and rail cars to gain an understanding of the engineering measures in place to prevent any release of hazardous materials in the event of an accident. SEA used this information to assess the adequacy of existing means of preventing accidents and to develop mitigation strategies. SEA carefully reviewed the Applicants' Environmental Report and correlated data presented therein with other available data sources.

#### **Hazardous Materials Release Reportability and Size**

The HMIRS database is intended to capture all incidents of hazardous materials releases in transportation nationwide, regardless of reporting requirements for the transportation regulatory agencies (e.g. FRA's Form 6180-54 for railroads). Because the majority of hazardous materials releases are very small, there is a distinct difference in both the frequency of releases and the distribution of the quantity of hazardous materials released between reportable releases and non-reportable releases.

For the period 1971-1996, the HMIRS includes records for releases from 16,383 railroad cars, an average of about 630 per year. Examination of the reported damages and casualties associated with these releases indicates that 1,762 of them would meet the FRA reportability criteria (i.e., an average of 68 per year). By comparison, during the combined periods 1985-1989 and 1994-1996, hazardous materials releases were reported to the FRA from 542 cars, also an average of 68 per year. Therefore, only about 11 percent of hazardous materials releases in the HMIRS database meet FRA reportability requirements.

## **B.4 ASSUMPTIONS, EVALUATION CRITERIA AND ANALYSIS**

The general analytic approach for quantitative evaluation of safety effects was to:

- Associate historical accident information, for example, number of accidents per year, with historical operations production information, such as annual train-miles or switch engine hours.
- Use knowledge of the operations and statistical methods such as regression analysis, to estimate a relationship, generally expressed as an accident rate (for example, accidents per million train-miles, or switch engine hours).
- Extrapolate the information to apply to the changed operations presented by the Applicants.

Separate analyses were conducted for passenger and freight train operations, hazardous materials accidents, and highway/rail at-grade crossing accidents. Each specific area of accident analysis has historically been studied within the industry, and SEA used the results of those historic studies as the springboard for these specific analyses.

### **B.4.1 Analysis Methods for Freight Operations Safety Effects**

SEA employed two distinct methods in the evaluation of potential freight effects that could result from the proposed Acquisition. First, a system-wide method was used to estimate the potential net effects. SEA also used a segment-specific method to evaluate the 54 segments that would experience a traffic increase meeting the Board's threshold of an eight trains per day increase.

#### **System-Wide Safety Effects Analysis**

SEA examined system-wide freight operations accident risk for the pre- and post-Acquisition configurations, with identification of mainline, yard, and terminal accidents. The individual occurrence of train accidents are both infrequent and unpredictable. The number occurring on any single carrier, or even nationwide, varies significantly around a long-term average rate. As an example, the national accident rate was at its most stable (since 1965) from 1986 through 1992 based on FRA data. During that period, the annual per-train-mile accident rates varied between 87 and 120 percent of the average rate for the period as shown on Tables B-2 through B-4. For smaller units of analysis (e.g. individual railroads, and especially individual routes), the variability around a long-term average will actually be higher; this is in accord with the mathematical Central Limit Theorem (commonly called the "law of large numbers")<sup>1</sup>. SEA

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<sup>1</sup> For a relatively straightforward discussion, see Hillier and Lieberman, *Introduction to Operations Research*, Holden-Day, Inc., San Francisco, 1967, pp. 65-66.

**Table B-2**  
**Annual Accident Rates Per Million Train Miles (1970-1996)**  
**Conrail and Predecessor Companies**

Year	Consolidated Rail Corporation	Erie- Lackawanna	Jersey Central (Central of New Jersey)	Lehigh Valley	Monongahela	Penn Central	Pennsylvania- Reading Seashore Lines	Pittsburgh & Lake Erie Railroad	Reading
1970		9.80	20.73	18.51	23.58	9.96	12.79	32.27	15.33
1971		9.21	18.25	18.71	30.12	5.79	13.68	42.73	12.51
1972		11.54	19.85	26.53	49.18	4.56	2.82	58.08	13.44
1973		14.33	16.02	27.31	26.14	6.1	6.01	56.32	17.64
1974		20.86	14.72	33.10	19.48	8.41	21.11	50.02	18.5
1975		14.20	13.60	29.10	86.7	9.1	5.5	25.90	9
1976	12.70	14.70	20.70	44.50	12.7	14.5	7.6	35.50	9
1977	15.10	15.1	15.1	15.1		15.1	15.1	36.70	15.1
1978	17.6							45.7	
1979	14.4							38.5	
1980	13.1							36.2	
1981	9.5							35.5	
1982	8.4							25.0	
1983	6.2							22.3	
1984	6.6							17.6	
1985	4.5							7.6	
1986	3.2							3.2	
1987	2.9								
1988	3.6								
1989	3.7								
1990	3.5								
1991	4.8								
1992	3.7								
1993	4.2								
1994	3.7								
1995	3.3								
1996	3.9								

Source: Accident/Incident Bulletin - FRA.

\*\* Accident rates reported in accidents per million train miles.

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**Table B-3**  
**Annual Accident Rates Per Million Train Miles (1970-1996)**  
**CSX and Predecessor Companies**

Appendix B: Safety

Year	Baltimore & Ohio Railroad	Chesapeake & Ohio Railroad	Chessie System Railroads	Chicago & Eastern Illinois	Clinchfield Railroad	CSX	Georgia	Louisville & Nashville Railroad	Monon	Richmod, Fredericksburg & Potomac	Seaboard Coastline Railroad	Seaboard Systems	Western Maryland Railway
1970	8.92	11.41		18.35	15		3.1	16.71	22.75	3.63	9.1		15.26
1971	8.92	10.78		16.45	14.43		7.72	17.61	13.38	4.87	10.75		20.89
1972	11.52	15.07		13.66	27.09		9.2	16.75	16.75	3.13	11.89		17.15
1973	15.09	15.92		20.97	28		5.74	17.77		3.79	12.52		33.24
1974	20.20	23.29		13.14	40.58		6.73	20.76		3.16	13.84		43.93
1975	13.20	13.40		8.40	21.6		10.1	14.7		16	13.6		23.50
1976	15.40	15.40		9.60	25.2		23.4	25.1		10	17.7		27.10
1977	14.50	16.40			25.7		40.6	25.8		10	22.5		21.10
1978	18.3	15.0			34.2		26.7	26.7		18.3	19.2		19.0
1979	18.8	15.6			31.2			16.4			12.9		23.4
1980	15.1	11.6			33.5			14.0			11.2		23.4
1981	10.7	8.3			25.1			7.2			6.7		12.4
1982	10.4	10.1			11.1			6.3			5.5		16.0
1983	7.1	6.1			6.1			4.5			4.5	4.5	10.2
1984	6.5	7.7			4.4							4.4	6.5
1985	7.6	7.6	7.6									4.4	7.6
1986			7.6									3.9	
1987			5.6			5.6						5.6	
1988						5.1							
1989						6.5							
1990						5.0							
1991						2.8							
1992						2.8							
1993						2.6							
1994						1.9							
1995						1.9							
1996						2.3							

Source: Accident/Incident Bulletin - FRA.

\*\* Accident rates reported in accidents per million train miles.

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**Table B-4**  
**Annual Accident Rates Per Million Train Miles (1970-1996)**  
**Norfolk Southern and Predecessor Companies**

Appendix B: Safety

Year	Akron, Canton & Youngston	Alabama Great Southern Railroad	Central of Georgia Railroad	Cincinnati, New Orleans & Texas Pacific Railway	Delaware & Hudson	Georgia & Southern Florida	Illinois Terminal	Norfolk & Western Railway	Norfolk Southern (to 1977)	Norfolk Southern	Southern Railway
1970	23.81	6.93	4.63	4.48	14.21	5.39	39.00	4.76	18.32		7.31
1971	14.66	4.88	3.16	5.88	12.65	7.85	32.65	3.93	19.13		7.86
1972	9.09	1.57	5.94	4.95	9.19	10.77	32.99	3.83	22.13		10.43
1973	2.73	5.33	5.93	4.14	20.97	12.07	39.66	4.01	47.01		10.88
1974	3.21	5.2	8.74	6.71	19.32	8.65	39.49	7.57	19.53		12.16
1975	4.20	4.5	7.5	4.3	12.90	11.6	31.70	8.20	19.50		11
1976	7.7	5.4	20.9	3.6	21.20	20.4	52.90	7.70	18.90		13.8
1977		6.4	14.9	5.1	16.70	11.9	71.60	7.50	6.10		12.1
1978		5.8	15.7	5.9	17.10	12.1	7.4	7.4	12.1		12.1
1979		4.2	12.1	4.3	19.70			5.9			10.1
1980		3.7	11.0	3.5	16.00			6.4			9.4
1981		2.7	6.8	2.2	23.10			6.9			4.8
1982		3.8	4.5	1.5	18.61			8.1			4.4
1983		3.1	4.4	3.4	19.67			7.2			4.0
1984		2.5	3.7	0.6	22.60			6.7			3.5
1985		0.5	5.6	1.9	11.92			7.7			2.6
1986		1.1	2.5	1.9	12.71			7.4			3.0
1987		4.1	4.1	4.1	12.68			4.1		4.1	4.1
1988					4.51					3.7	
1989					6.75					3.1	
1990					6.89					3.2	
1991					7.49					2.9	
1992					2.7					2.7	
1993										2.2	
1994										2.0	
1995										1.9	
1996										2.6	

Source: Accident/Incident Bulletin - FRA.

\*\* Accident rates reported in accidents per million train miles.

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performed an examination of system-wide accident risk for the pre- and post-Acquisition conditions.

### Segment-Specific Safety Effects Analysis

SEA performed a segment-specific analysis of mainline accidents, other than rail-highway (at-grade crossing) accidents. SEA estimated three categories of accidents as follows:

- Derailments, based on segment train-miles, segment car-miles, and the segment's control method and track class.
- Collisions with other trains, based on train-miles and adjusted for traffic density and control method.
- Non-grade crossing accidents other than derailments and collisions with other trains, based on segment train-miles.

SEA derived the accident rates for derailments by estimating the total number of freight train- and car-miles operated annually in each of several strata, or combinations of FRA track class and control method, and dividing accidents designated either as train-mile- or car-mile-dependent by these quantities. SEA made minor adjustments to the historic rates to achieve overall consistency, with results as shown in Table B-5. SEA estimated annual derailments as:

$$A_{\text{derail}} = DR_{tm} TM + DR_{cm} CM$$

where:

TM is the annual train-miles on the segment.

CM is the annual car-miles on the segment.

$DR_{tm}$  is the per-train-mile derailment rate for the segment.

$DR_{cm}$  is the per-car-mile derailment rate for the segment.

SEA estimated annual collisions by a stratified collision rate per train-miles multiplied by an adjusting factor for density:

$$A_{\text{collision}} = F_{\text{density}} CR_{tm} TM$$

The stratified values for the rate  $CR_{tm}$  are shown in Table B-5. For some types of accidents, the presence of Automatic Train Protection (ATP) or Automatic Train Stop (ATS) signal enforcement devices will reduce accidents rates for signaled territory.

By comparing the actual and predicted collision rates among strata, SEA derived a density-adjustment factor:

$$F_{density} = 0.75 + \frac{0.75}{1.0 + e^{[2.25 - 0.034 TPD - 0.445 \ln (TPD + 0.001)]}}$$

where:

TPD is the total trains per day (freight and passenger) on the segment.

SEA found that non-grade crossing accidents other than derailments and collisions with other trains occur at a relatively uniform rate per train-mile when compared by the strata used for other types of accidents. Therefore, SEA applied a uniform rate:

$$A_{other\ ngc} = 9.7 \times 10^{-8} TM$$

**Table B-5**  
**Stratified Accident Rates for Mainline Segments**

Control Method	FRA Track Class	Train-Mile Derailment Rate, DR <sub>tm</sub>	Car-Mile Derailment Rate, DR <sub>cm</sub>	Train-Mile Collision Rate, CR <sub>tm</sub>
Unsignaled ("dark")	1 or exempt	6.20 x 10 <sup>-7</sup>	2.00 x 10 <sup>-8</sup>	1.98 x 10 <sup>-7</sup>
Unsignaled ("dark")	2	3.30 x 10 <sup>-7</sup>	1.80 x 10 <sup>-8</sup>	5.71 x 10 <sup>-8</sup>
Unsignaled ("dark")	3	2.90 x 10 <sup>-7</sup>	6.10 x 10 <sup>-9</sup>	5.71 x 10 <sup>-8</sup>
Unsignaled ("dark")	4	2.80 x 10 <sup>-7</sup>	7.10 x 10 <sup>-9</sup>	5.71 x 10 <sup>-8</sup>
Unsignaled ("dark")	5 or 6	2.80 x 10 <sup>-7</sup>	7.10 x 10 <sup>-9</sup>	5.71 x 10 <sup>-8</sup>
Signaled (ABS, CTC)	1 or exempt	3.30 x 10 <sup>-7</sup>	6.20 x 10 <sup>-9</sup>	1.35 x 10 <sup>-7</sup>
Signaled (ABS, CTC)	2	2.50 x 10 <sup>-7</sup>	7.50 x 10 <sup>-9</sup>	4.33 x 10 <sup>-8</sup>
Signaled (ABS, CTC)	3	1.90 x 10 <sup>-7</sup>	4.70 x 10 <sup>-9</sup>	4.33 x 10 <sup>-8</sup>
Signaled (ABS, CTC)	4	1.50 x 10 <sup>-7</sup>	5.50 x 10 <sup>-9</sup>	4.33 x 10 <sup>-8</sup>
Signaled (ABS, CTC)	5 or 6	1.50 x 10 <sup>-7</sup>	5.50 x 10 <sup>-9</sup>	4.33 x 10 <sup>-8</sup>
Signaled with ATP/ATS	1 or exempt	1.65 x 10 <sup>-7</sup>	6.20 x 10 <sup>-9</sup>	1.08 x 10 <sup>-7</sup>
Signaled with ATP/ATS	2	1.25 x 10 <sup>-7</sup>	7.50 x 10 <sup>-9</sup>	3.71 x 10 <sup>-8</sup>
Signaled with ATP/ATS	3	1.00 x 10 <sup>-7</sup>	4.70 x 10 <sup>-9</sup>	3.71 x 10 <sup>-8</sup>
Signaled with ATP/ATS	4	1.00 x 10 <sup>-7</sup>	5.50 x 10 <sup>-9</sup>	3.71 x 10 <sup>-8</sup>
Signaled with ATP/ATS	5 or 6	1.00 x 10 <sup>-7</sup>	5.50 x 10 <sup>-9</sup>	3.71 x 10 <sup>-8</sup>

### **Safety Effects of Highway Truck Diversions**

CSX and NS estimated the number of truckloads of freight that could be expected to be diverted to rail because of the improved competition that they believe would result from the proposed Acquisition. SEA made no verification or validation efforts of the large truck vehicle miles of travel (VMT) reduction estimates made by the CSX and NS railroads. SEA notes that a minor amount of double counting of trucks diverted may have occurred because NS and CSX arrived at their estimates independently. The accident reduction calculations assumed that these were reasonable VMT estimates and could be used for comparison of projected accidents with or without the merger. Table B-6 shows large truck accident reduction calculations that could be attributed to the truck-rail diversions CSX and NS estimate.

Using either set of accident rates shows that there could be a significant reduction in the projected large truck accidents on the highway system that could be attributed to the proposed Acquisition. SEA used the preliminary 1995 accident data rates for consistency with the railroads' diversion estimates.

### **Criteria of Significance for Safety Effects of Freight Rail Operations**

SEA determined that increases in rail activity could potentially create significant safety impacts if criteria were exceeded. First, SEA compared the Acquisition-related change in accident rate for a rail segment to the normal fluctuation in the state-wide accident rate. Second, SEA determined if the rail segment is predicted to experience an accident more frequently than once every 100 years per route mile. If a rail line segment is predicted to have an increase in accident rate greater than the normal variations in state-wide accident rates and to have an accident more frequently than once every 100 years per route mile, SEA considered mitigation for safety impacts. SEA based these two criteria of significance on the following:

- Annual variation in the state-wide accident rate, as detailed in FRA Accident/Incident Bulletins.
- National frequency of railroad accidents.

SEA determined that nationally, over the last 20 years, the number of accidents varies plus or minus 10 percent each year from the previous year. SEA calculated the annual state-wide fluctuation in accident rates for each state.

In 1996, a total of 1,078 freight and passenger train accidents occurred on the 126,682 miles of main line railroad tracks operated in the United States. This means that on each railroad route mile, a freight train accident can be expected to occur once every 117 years. In the last 20 years, the accident rate has decreased from 15.0 accidents per million train miles (in 1978) to 4.0 accidents per million train miles (in 1995), an overall decrease of 73 percent in the accident rate. To be conservative, SEA applied a level of one accident per 100 years as the significance criteria triggering mitigation analysis in the Draft EIS.

**Table B-6**  
**Highway Truck Diversion Accident Reduction Estimates**

State	NS VMT Diversion (1,000s)	CSX VMT Diversion (1,000s)	Total VMT Diversion (1,000s)	Projected Annual Accident Reductions*			Projected Annual Accident Reductions**		
				Total	Pers. Inj.	Fatal	Total	Pers. Inj.	Fatal
AL	8,388	12,959	21,347	46.1	11.7	0.6	43.3	3.6	0.9
CT	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
DC	0	8,931	8,931	19.3	4.9	0.2	18.1	1.5	0.4
DE	1,064	6,813	7,877	17.0	4.3	0.2	16.0	1.3	0.3
FL	4,837	0	4,837	10.4	2.7	0.1	9.8	0.8	0.2
GA	15,962	0	15,962	34.5	8.8	0.4	32.4	2.7	0.6
IL	7,237	13,949	21,186	45.8	11.7	0.6	43.0	3.6	0.8
IA	5,383	0	5,383	11.6	3.0	0.1	10.9	0.9	0.2
IN	15,668	13,903	29,571	63.9	16.3	0.8	60.0	5.0	1.2
KY	7,627	0	7,627	16.5	4.2	0.2	15.5	1.3	0.3
LA	978	0	978	2.1	0.5	0.0	2.0	0.2	0.0
MA	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
MD	10,986	30,452	41,438	89.5	22.8	1.1	84.1	7.0	1.7
MI	2,977	0	2,977	6.4	1.6	0.1	6.0	0.5	0.1
MO	4,063	0	4,063	8.8	2.2	0.1	8.2	0.7	0.2
MS	2,132	0	2,132	4.6	1.2	0.1	4.3	0.4	0.1
NE	859	0	859	1.9	0.5	0.0	1.7	0.1	0.0
NC	18,768	20,486	39,254	84.8	21.6	1.1	79.7	6.7	1.6
NJ	15,150	691	15,841	34.2	8.7	0.4	32.2	2.7	0.6
NY	219	42,859	43,078	93.0	23.7	1.2	87.4	7.3	1.7
OH	53,717	188,675	242,392	523.6	133.3	6.5	492.1	41.2	9.7
PA	95,004	38,531	133,535	288.4	73.4	3.6	271.1	22.7	5.3
RI	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
SC	15,400	22,810	38,210	82.5	21.0	1.0	77.6	6.5	1.5
TN	23,705	0	23,705	51.2	13.0	0.6	48.1	4.0	0.9
VA	58,451	0	58,451	126.3	32.1	1.6	118.7	9.9	2.3
WV	10,623	1,841	12,464	26.9	6.9	0.3	25.3	2.1	0.5
<b>Total</b>	<b>379,198</b>	<b>402,900</b>	<b>782,098</b>	<b>1689.3</b>	<b>430.2</b>	<b>21.1</b>	<b>1587.7</b>	<b>133.0</b>	<b>31.3</b>
*Accidents calculated with Large Truck (> 10,000 lbs.) accident rates used by NS from									
U. S. DOT - National Highway Administration 1994 data									
Source: Traffic Safety Facts 1994 USDOT NHSTA									
**Accidents calculated with Large Truck (>10,000 lbs.) accident rates from									
U. S. DOT - National Highway Administration preliminary 1995 data									
Source: 1997 National Transportation Statistics, USDOT, Bureau of Transportation Statistics									

## **B.4.2 Analysis Methods for Passenger Rail Operation Safety Effects**

### **System-Wide Safety Effects Analysis**

Passenger trains operate on a relatively small number of system rail line segments compared to freight trains on the Conrail, CSX, and NS systems. The nature of freight traffic and passenger traffic on these segments also differs markedly. Passenger operations presently occur in one of three typical operating environments:

- The Northeast Corridor, a number of rail line segments where high-speed Amtrak trains, and in many cases commuter trains, predominate, and there is a relatively small volume of freight train traffic.
- Suburban rail lines, rail line segments in major metropolitan areas which are dominated by commuter trains, where freight trains comprise a small share of the traffic.
- Predominantly freight-carrying rail lines, where Amtrak or commuter trains comprise a minority of the total daily train traffic.

Aggregation of predicted accidents to a system-wide basis for such dramatically different rail line segments cannot provide a meaningful assessment of changes to accident potential from the proposed Acquisition. Therefore, SEA did not estimate the potential safety effects to passenger rail operations at the system-wide level.

### **Segment-Specific Safety Effects Analysis**

SEA performed quantitative analysis on all rail segments carrying passenger trains where the number of freight trains would increase by one or more trains. SEA estimated only the expected annual change in FRA-reportable accidents on each such segment as a result of the introduction of additional freight traffic. SEA assumed these changes would comprise only collisions between passenger trains and freight trains, because the occurrence rate of derailments and other single-train events would not be significantly affected by the presence of additional freight traffic. SEA did not calculate the expected change in accidents on rail segments where the number of freight trains on a rail line would not change, or would decrease as a result of the proposed Acquisition.

SEA assumed that the basic accident rate for this analysis to be the reportable collisions per freight route contention (FRC). For the purposes of this analysis, a freight route contention is defined as an instance of a passenger train and a freight train operating in such a way that main track authority must be conferred on one of the trains in preference to the other. Freight route contentions include: possible delays as a freight train enters a route segment; meets on single-track territory; and overtakes in both single- and multiple-track territory. Freight route contentions may be resolved by operating rules, train orders, signal indications, or any other approved method of conferring main track authority. SEA estimated FRCs separately for both Amtrak and commuter trains, as discussed below.

Between 1993 through 1996 inclusive, SEA found an average of 1.5 reportable mainline collisions annually between passenger trains and freight trains, 0.25 involving commuter trains, and 1.25 involving Amtrak trains. The number of annual FRCs nationwide, estimated according to the methods described below, is about 12,000 for commuter trains, and 139,000 for Amtrak trains. The estimated collision rates are 20 per million FRCs for commuter trains, and 10 per million FRCs for intercity (Amtrak) trains. The higher estimated rate for commuter operations is consistent with the more frequent start-and-stop cycles typical of commuter service.

Therefore, SEA estimated the changes in annual commuter train accidents for a segment as:

$$CPA_c = 2.0 \times 10^{-5} (FRC_{c,after} - FRC_{c,before})$$

SEA estimated the change in annual Amtrak train accidents as:

$$CPA_a = 1.0 \times 10^{-5} (FRC_{a,after} - FRC_{a,before})$$

where CPA is the estimated change in annual reportable passenger train accidents, and the subscripted FRC values are those estimated for conditions before and after the Acquisition.

SEA estimated FRCs depend on both the segment's traffic characteristics and its physical configuration. The estimating formulas for each are presented below.

Route conflict issues are the same for commuter and Amtrak trains. This formula incorporates a typical distribution of commuter trains and freight trains at various traffic levels, to which an "Amtrak factor" may be applied to reflect the tendency of intercity train schedules to cluster less heavily toward peak periods. The values returned represent estimated annual FRCs for a rail line segment operating as a single mainline with passing sidings, under wayside signals (e.g. ABS or CTC). Adjustments for other operating situations are discussed later. The following equation estimated basic FRCs:

$$FRC = \frac{D_{eff} T_f L F_{control} F_{config} F_{amtrak}}{(1.0 + e^{(7.196 - 0.00023 T_p - 0.7441 \ln(T_p + 1))})}$$

where:

FRC is the estimated number of annual freight route contentions.

$T_f$  is the number of daily freight trains.

$T_p$  is the number of daily passenger trains (applied separately for commuter and Amtrak).

$L$  is the segment length in miles.

$D_{eff}$  is the effective (traffic-equivalent) number of days in a calendar year (assumed to be 300 for this analysis).

$F_{control}$ ,  $F_{config}$ , and  $F_{amtrak}$  are defined below.

The factor  $F_{control}$  depends on the control method used on the segment. For signaled territory without automatic train stop (ATS) or automatic train protection (ATP), it assumes the value 1.00. For segments with ATS or ATP, it assumes the value 0.70. For unsignaled ("dark") segments, it assumes the value 1.50.

The "Amtrak factor"  $F_{amtrak}$  assumes the value 1.00 for commuter trains; for Amtrak trains, it is estimated by:

$$F_{amtrak} = 0.25 + 0.06 T_a^{0.3} + 0.16 T_a e^{(-.08 T_a)}$$

where:

$T_a$  is the number of daily Amtrak trains on the segment.

The factor  $F_{config}$  reflects the number of mainline tracks in the segment. It assumes the value 1.00 for segments with a single main track. For commuter trains on segments with multiple main tracks, it is given by:

$$F_{config} = F_{mt} ( 0.24 + 0.042 T_c^{0.2} )$$

where:

$T_c$  is the number of daily commuter trains on the segment.

$F_{mt}$  assumes the values: 1.00 for two (2) main tracks; 0.71 for three (3) main tracks; and 0.52 for four (4) main tracks.

For Amtrak trains,  $F_{config}$  is obtained by substituting  $T_a$  for  $T_c$  in the equation for commuter trains, and then multiplying the result by a factor of 0.75.

### Criteria of Significance for Passenger Rail Operations Safety Effects

SEA determined that increased freight traffic on a rail line segment could increase the possibility of collision between a passenger train and a freight train. Nationally, the passenger train accident

rate varies about 30 percent from year to year. To assess significance, SEA first determined whether the Acquisition-related change in the projected accident rate was greater than a more conservative annual fluctuation of 25 percent.

Under second tier analysis, SEA then determined whether the rail line segment was predicted to experience an accident more frequently than once every 150 years. This reflects the annual experience for passenger train accidents on the route mileage of the various passenger service providers.

### **B.4.3 Analysis Methods for Safety Effects at Highway/Rail At-Grade Crossings**

The methods used to evaluate the potential impacts related to highway/rail at-grade crossing safety is presented in this section. Appendix C, "Traffic and Transportation" contains discussions of the methods used to evaluate the potential effects relating to traffic delays, and the potential impacts to passenger and commuter rail traffic due to increased train traffic.

SEA developed methods to quantify vehicle-train accident risk. SEA use these methods to estimate the potential transportation effects due to increases in daily trains resulting from the proposed Acquisition. The evaluation of at-grade crossings on a system-wide basis is presented in Chapter 4, and in Chapter 5 on a site-specific basis.

#### **System-Wide Safety Effects Analysis**

**Generalized Accident Model Development.** SEA developed a set of mathematical functions based on compilation of the universe of accident data from 1991 through 1995 using linear regression techniques. SEA stratified these functions as follows:

1. Data for Average Daily Traffic (ADT) volumes of 5,000 vehicles or less.
2. Data for ADT volumes greater than 5,000 and less than or equal to 15,000.
3. Data for ADT volumes greater than 15,000.

SEA developed mathematical functions for each of the three groups to provide a relationship of number of accidents as a function of number of trains and warning device type. This information can be used for any increase or decrease in the number of daily freight trains. SEA developed three separate mathematical functions for each ADT range as follows:

$$A_i = a_i \times T_i + b_i \times D_i + C_i$$

where:

$A_i$  is the number of accidents for ADT range I.

I is 1 for ADT of 0-5,000; 2 for ADT of 5,001 - 15,000; and 3 for ADT of 15,000+.

T is the number of trains.

D is the warning device type code: D is 1 for passive; 2 for flashing lights; and 3 for gates.

$a_i$  is the regression coefficient for trains.

$b_i$  is the regression coefficient for warning device.

$c_i$  is the constant for ADT range I.

**Accident Sensitivity Analysis.** Based on the mathematical functions, SEA developed a model to conduct sensitivity analysis of accident estimates by variation in the increase in number of trains per segment and each warning device type. The sensitivity analysis shows that accident frequency increases slightly as the number of trains is increased and as the roadway traffic is higher. The analysis also shows that the accident frequency decreases significantly as the at-grade crossing warning devices are improved. SEA applied these general trends to individual crossings throughout the rail system. SEA developed ranges of roadway ADT, as shown in Table B-7. This table, which summarize the results of the sensitivity analysis, show indices of accident frequencies based on trains per day and type of warning device. The system-wide analysis provides an estimated change in accident rate that would result from all increases in daily train activity. It also provides a basis for assessing the reduction in accident rate that would be expected to result from improving crossing devices.

**Table B-7  
Highway/Rail At-Grade Crossing Accident Index  
Roadway ADT More Than 15,000**

Trains Per Day	Roadway ADT 0 to 5,000			Roadway ADT 5,001 to 15,000			Roadway ADT More Than 15,000		
	Grade Crossing Warning Device								
	Passive	Flashing Lights	Gates	Passive	Flashing Lights	Gates	Passive	Flashing Lights	Gates
1	1.66	1.33	1.00	1.73	1.40	1.06	2.00	1.67	1.34
2	1.68	1.34	1.01	1.74	1.41	1.08	2.01	1.68	1.35
3	1.69	1.36	1.02	1.75	1.42	1.09	2.02	1.69	1.36
4	1.70	1.37	1.03	1.76	1.43	1.10	2.03	1.70	1.37
5	1.71	1.38	1.05	1.77	1.44	1.11	2.05	1.71	1.38
6	1.72	1.39	1.06	1.79	1.45	1.12	2.06	1.73	1.39
7	1.73	1.40	1.07	1.80	1.47	1.13	2.07	1.74	1.41
8	1.75	1.41	1.08	1.81	1.48	1.15	2.08	1.75	1.42
9	1.76	1.42	1.09	1.82	1.49	1.16	2.09	1.76	1.43
10	1.77	1.44	1.10	1.83	1.50	1.17	2.10	1.77	1.44
11	1.78	1.45	1.12	1.84	1.51	1.18	2.12	1.78	1.45

**Table B-7**  
**Highway/Rail At-Grade Crossing Accident Index**  
**Roadway ADT More Than 15,000**

Trains Per Day	Roadway ADT 0 to 5,000			Roadway ADT 5,001 to 15,000			Roadway ADT More Than 15,000		
	Grade Crossing Warning Device								
	Passive	Flashing Lights	Gates	Passive	Flashing Lights	Gates	Passive	Flashing Lights	Gates
12	1.79	1.46	1.13	1.86	1.52	1.19	2.13	1.80	1.46
13	1.80	1.47	1.14	1.87	1.54	1.20	2.14	1.81	1.48
14	1.82	1.48	1.15	1.88	1.55	1.22	2.15	1.82	1.49
15	1.83	1.49	1.16	1.89	1.56	1.23	2.16	1.83	1.50
16	1.84	1.51	1.17	1.90	1.57	1.24	2.17	1.84	1.51
17	1.85	1.52	1.19	1.91	1.58	1.25	2.19	1.85	1.52
18	1.86	1.53	1.20	1.93	1.59	1.26	2.20	1.87	1.53
19	1.87	1.54	1.21	1.94	1.61	1.27	2.21	1.88	1.55
20	1.88	1.55	1.22	1.95	1.62	1.29	2.22	1.89	1.56
21	1.90	1.56	1.23	1.96	1.63	1.30	2.23	1.90	1.57
22	1.91	1.58	1.24	1.97	1.64	1.31	2.24	1.91	1.58
23	1.92	1.59	1.26	1.98	1.65	1.32	2.26	1.92	1.59
24	1.93	1.60	1.27	2.00	1.66	1.33	2.27	1.94	1.60
25	1.94	1.61	1.28	2.01	1.68	1.34	2.28	1.95	1.61
26	1.95	1.62	1.29	2.02	1.69	1.36	2.29	1.96	1.63
27	1.97	1.63	1.30	2.03	1.70	1.37	2.30	1.97	1.64
28	1.98	1.65	1.31	2.04	1.71	1.38	2.31	1.98	1.65
29	1.99	1.66	1.33	2.05	1.72	1.39	2.33	1.99	1.66
30	2.00	1.67	1.34	2.07	1.73	1.40	2.34	2.01	1.67
31	2.01	1.68	1.35	2.08	1.75	1.41	2.35	2.02	1.68
32	2.02	1.69	1.36	2.09	1.76	1.43	2.36	2.03	1.70
33	2.04	1.70	1.37	2.10	1.77	1.44	2.37	2.04	1.71
34	2.05	1.72	1.38	2.11	1.78	1.45	2.38	2.05	1.72
35	2.06	1.73	1.40	2.12	1.79	1.46	2.40	2.06	1.73
36	2.07	1.74	1.41	2.14	1.80	1.47	2.41	2.07	1.74
37	2.08	1.75	1.42	2.15	1.82	1.48	2.42	2.09	1.75
38	2.09	1.76	1.43	2.16	1.83	1.49	2.43	2.10	1.77
39	2.11	1.77	1.44	2.17	1.84	1.51	2.44	2.11	1.78
40	2.12	1.79	1.45	2.18	1.85	1.52	2.45	2.12	1.79
41	2.13	1.80	1.47	2.19	1.86	1.53	2.46	2.13	1.80
42	2.14	1.81	1.48	2.21	1.87	1.54	2.48	2.14	1.81
43	2.15	1.82	1.49	2.22	1.89	1.55	2.49	2.16	1.82
44	2.16	1.83	1.50	2.23	1.90	1.56	2.50	2.17	1.84
45	2.18	1.84	1.51	2.24	1.91	1.58	2.51	2.18	1.85
46	2.19	1.86	1.52	2.25	1.92	1.59	2.52	2.19	1.86

**Table B-7**  
**Highway/Rail At-Grade Crossing Accident Index**  
**Roadway ADT More Than 15,000**

Trains Per Day	Roadway ADT 0 to 5,000			Roadway ADT 5,001 to 15,000			Roadway ADT More Than 15,000		
	Grade Crossing Warning Device								
	Passive	Flashing Lights	Gates	Passive	Flashing Lights	Gates	Passive	Flashing Lights	Gates
47	2.20	1.87	1.54	2.26	1.93	1.60	2.53	2.20	1.87
48	2.21	1.88	1.55	2.28	1.94	1.61	2.55	2.21	1.88
49	2.22	1.89	1.56	2.29	1.95	1.62	2.56	2.23	1.89
50	2.23	1.90	1.57	2.30	1.97	1.63	2.57	2.24	1.91

For a highway/rail at-grade crossing with a passive warning device and with a roadway ADT of between 0 and 5,000 (see Table B-7), an increase in trains per day from 10 to 15 would result in an increase in the accident index from 1.77 to 1.83, a three percent increase. This represents an increase in accident frequency. If the crossing device at this location were to be upgraded to flashing lights, the accident index with 15 trains per day would be 1.49. This demonstrates that upgrading the warning device would result in a lower accident frequency than with 10 trains per day and the passive device.

### Segment-Specific Safety Effects Analysis

SEA evaluated safety implications to roadway users from increased train operations on rail line segments resulting from the proposed Acquisition. For rail line segments, SEA determined the most appropriate evaluation as assessing accident potential at locations where tracks cross roadways at the same elevation, for example highway/rail at-grade crossings. Overpasses or underpasses where the roadway or railroad physically is separated from the other did not warrant attention in this study.

SEA conducted a safety analysis of highway/rail at-grade crossings by predicting the post-Acquisition accident risk. SEA analyzed 54 rail line segments with increases of eight or more trains per day. The results of this analysis are site-specific by rail line segment and are included in Chapter 5, "State Setting, Impacts and Proposed Mitigation," in the appropriate state sections.

The government or agency with local jurisdiction generally regulates the roadway portion of a highway/rail at-grade rail/crossing. This regulatory authority is applied under the guidance of a state public utility or commerce commission and follows the technical aspects of the *Manual Uniform Traffic Control Devices* (MUTCD).

SEA calculated the risk of accidents at highway/rail at-grade crossings using a standard method the FRA developed. The method is described in a report, *Summary of the DOT Rail-Highway*

*Crossing Resource Allocation Procedure-Revised.*<sup>2</sup> The method calculates the risk of an accident at a highway/rail at-grade crossing based upon the characteristics of the grade crossing and statistical information on historic accident experience. The historic data are based on FRA records of accidents and incidents, along with the inventory of physical and functional crossing characteristics. The method uses three formulas:

$$a = K \times EI \times DT \times MS \times MT \times HP \times HL$$

$$B = \frac{I_o}{T_o + T} (a) + \frac{T}{T_o + T} (N/T) \text{ where } T_o = 1/(0.05 + a)$$

- A = 0.8239 x B (for crossings protected by passive devices only).
- = 0.6935 x B (for crossings protected by flashing lights only).
- = 0.6714 x B (for crossings protected by gates and flashing lights).

where:

a is the initial predicted number of accidents per year.

K is the basic accident prediction formula constant.

EI is the exposure index factor based on the product of the number of roadway vehicles and trains per day.

DT is the factor for the number of through trains per day during daylight.

MS is the factor for maximum timetable speed.

MT is the factor for number of main tracks.

HP is the factor for paved roadway.

HL is the factor for number of roadway lanes.

B is the weighted average of predicted accident rate and actual accident history.

T is the number of years of recorded accident history.

T<sub>o</sub> is the weighting factor in DOT accident prediction formula.

<sup>2</sup> Federal Railroad Administration, Summary of the DOT Rail-Highway Crossing, Resource Allocation Procedure-Revise. 1992.

N is the number of accidents recorded for a crossing in T years.

A is the final predicted number of accidents per year.

The first formula is the result of the multiple regression analysis of data from the FRA databases. Because the FRA data cannot describe the precise characteristics of each crossing, such as sight distances, the calculation of predicted accident rates is improved by the addition of actual accident experience at a highway/rail at-grade crossing.

The results of the first formula serve as an input to the second formula, which averages the initial predicted accident rates for a highway/rail at-grade crossing with the actual experience. FRA recommends that actual accident experience be limited to the 1991 through 1995 period, as characteristics of the highway/rail at-grade crossing may have changed such that earlier experience is not representative of future conditions.

SEA input the result of the second formula to the third formula, which applies a constant that adjusts for the level of protection that the warning device at the crossing would provide. SEA updated the values shown in the third formula from the values included in the original report and used a more recent report, *Highway-Rail Crossing Accident/Incident and Inventory Bulletin*. The FRA database served as the source of pre-Acquisition information on train traffic. For the analysis of post-Acquisition conditions, SEA's analysis of train operations provided the information on the number of trains and time of day that they operate.

### **Criteria of Significance for Highway/Rail At-Grade Crossing Safety Effects**

SEA established a two-step evaluation process to determine whether the proposed Conrail Acquisition would significantly affect safety at highway/rail at-grade crossings.

1. SEA identified those highway/rail at-grade crossings on rail line segments with increases of eight or more trains per day with high accident frequencies under pre- and post-Acquisition conditions.
2. SEA established the level of increases in accident frequency that result in a significant impact and thus merit consideration of mitigation strategies.

For highway/rail at-grade crossings with higher accident frequencies, a smaller increase in frequency merited further examination. That is, where there already may be a higher rate of accidents, an increase in the frequency is less acceptable. For at-grade crossings with lower accident frequencies, a larger increase in frequency would have to be present before SEA considered the potential impact to be significant, and thus warrant evaluating mitigation.

SEA considered highway/rail at-grade crossings that would either be within the top 50 for the state or have accident frequencies of at least 0.15 per year (or one accident every seven years) and an increase of at least 0.01 accidents per year (or one additional accident for every 100 years) as significant. For other highway/rail at-grade crossings that would not meet or exceed the 50

highest frequencies or the 0.15 accident rate, SEA considered an increase of at least 0.05 accidents per year (or one additional accident every 20 years) as significant.

#### B.4.4 Analysis Methods for Safety Effects of Hazardous Materials Rail Transportation

SEA analyzed potential safety impacts of the proposed Acquisition related to hazardous materials transportation on the rail segments and at yards and terminals, including classification and intermodal facilities. SEA developed methods to quantify the potential risk of a release of hazardous materials associated with the transportation of these substances. SEA used these methods to estimate the potential effects due to increases in activity as a result of the proposed Acquisition. The evaluation of the system-wide effects of hazardous materials transportation is presented in Chapter 4; Chapter 5 presents a site-specific analysis on a state-by-state basis.

The method for estimating hazardous materials releases is essentially an application of conditional probabilities to the estimated annual accidents in freight operation. SEA estimated conditional probabilities for three classes of mainline accident and for accidents in yards. SEA derived the conditional probabilities for mainline accidents from the FRA's accident/incident database for 1994-1996 inclusive. The estimate of total expected annual hazardous materials releases (HMR) associated with reportable mainline accidents on a segment is:

$$HMR = C_{hm} ( P_{derail} A_{derail} + P_{rgc} A_{rgc} + P_{ngcd} A_{ngcd} )$$

where:

HMR is the expected annual hazardous materials releases on a segment.

$C_{hm}$  is the number of cars in an average train's consist carrying hazardous materials.

$P_{derail}$  is the conditional probability of a hazardous materials release for a car carrying hazardous materials which is involved in a derailment.

$A_{derail}$  is the expected number of annual derailments in the segment, estimated according to the methods described in Section B.4.1.

$P_{rgc}$  is the conditional probability of a hazardous materials release for a car carrying hazardous materials which is involved in a reportable grade crossing accident, estimated from FRA accident/incident data from 1994-1996 as 0.0081.

$A_{rgc}$  is the expected number of annual reportable grade crossing accidents in the segment, estimated as 3.5 percent of total grade crossing accidents from the FRA formula as described in Section B.4.1.

$P_{ngcd}$  is the conditional probability of a hazardous materials release for a car carrying hazardous materials which is involved in an non-grade crossing accident other than a derailment, estimated from FRA accident/incident data from 1994-1996 as 0.0078.

$A_{ngcd}$  is the expected number of annual non-grade crossing accidents other than derailments in the segment, estimated according to the methods described in Section B.4.1.

SEA related the estimate of the conditional probability of release for derailments,  $P_{derail}$ , to the segment's typical freight speed (TFS):

$$P_{derail} = \frac{0.128}{1.0 + e^{[2.6135 - 0.0385 TFS - 0.8075 (\frac{TFS}{60})^2]}}$$

This expression increases with TFS, and SEA derived it from the FRA accident/incident database for 1994-96 for derailments occurring in various speed ranges. SEA estimated TFS in accordance with Table B-1. The value of  $P_{derail}$  is about 0.0091 at one mile per hour; it approaches 0.128 at very high speeds.

SEA calculated the pre- and post-Acquisition potential for accidental releases of hazardous materials from mainline accidents. These calculations indicated that the risk could increase by large percentages; however, the intervals between consecutive expected releases were in the hundreds and thousands of years. Because of the uncertainties in applying conditional probabilities to accurately predict the occurrence of accidental releases of hazardous materials, and the long interval between consecutive predicted accidents, SEA did not consider this analysis conclusive. SEA identified a more meaningful measure of the potential adverse effects. SEA examined the increases in hazardous materials traffic on a segment-by-segment basis. SEA found that certain rail line segments would increase in the number of cars carrying hazardous materials so that rail line segments not currently designated as a key route would become key routes after the proposed Conrail Acquisition. As previously discussed, the railroads currently manage the transportation of large volumes of hazardous materials on a key route basis with special operating restrictions to ensure public safety. SEA further identified the need to deal with large increases in the volume of hazardous material carloads moving on existing key routes.

### Yards and Terminals

SEA estimated the number of hazardous materials releases associated with reportable yard accidents by applying a rate of 0.005 releases per involved hazardous materials carrying car. SEA derived this rate from examining 3,253 nationwide yard accidents for 1995 and 1996, in which 18 of the 3,569 involved hazardous materials carrying cars released some hazardous materials. From the total of 45,059 involved cars of all types, SEA assumed that each estimated yard accident would involve 14 cars. SEA also assumed the number of involved hazardous materials cars in each estimated accident was 14 times the fraction of the railroad's system total estimated carloads which carry hazardous materials. SEA estimated these fractions from AAR

statistics for 1996 as: eight percent for CSX; six percent for NS; and seven percent for CR. SEA did not assume any changes in these fractions for the post-Acquisition case.

### **Criteria of Significance for Safety Effects of Hazardous Materials Rail Transportation**

SEA considered impacts of rerouting hazardous material car loads to be potentially significant if the change in volume would make a rail line segment whose volume did not warrant key route designation into a key route post-Acquisition. Statistically, that means the volume of hazardous material car loads would exceed the AAR's Circular OT-55 B volume level of 10,000 annual car loads on a rail line. A second threshold was whether the increase in volume would double the number of hazardous material car loads traveling on a key route. For rail lines whose pre-Acquisition volume did not warrant key route designation, SEA set the threshold at 20,000 annual car loads, double the minimum for key route status by the AAR standards. This second threshold would be the basis for designating a rail line segment as a "major key route".

## **B.5 SAFETY ANALYSIS RESULTS**

Attachments B-1 through B-7 of this Appendix show the results of the safety analyses. Attachments B-1 through B-3 provide the results of rail line segment-specific estimates of accident frequency, grouped by state, based on the methods described in this Appendix. Each attachment is in the same format, and shows the rail line segment identifier, end points, the pre-Acquisition rail line owner, the rail line segment length in miles, the number of pre- and post-Acquisition trains, the percent increase in the accident rate, and the expected interval, in years, between consecutive occurrences of an accident, or release of hazardous material due to an accident.

Attachment B-1 shows the rail line segment-specific analysis of freight train safety on the rail line segments where the number of daily freight trains is expected to increase by eight or more.

Attachment B-2 indicates the rail line segment-specific analysis of passenger train safety on the rail line segments where passenger trains operate and the number of daily freight trains is expected to increase by one or more trains.

Attachment B-3 shows the rail line segment-specific analysis of all of the rail line segments where the number of hazardous material cars is expected to increase due to the proposed Acquisition.

Attachment B-4 provides the changes in cars switched per day at intermodal terminals and yards, the expected interval between consecutive accidents both pre- and post-Acquisition, and the percent change in the likelihood of an accidents involving the release of hazardous materials.

Attachments B-5 and B-6 show the rail line segments anticipated to have an increase in the number of hazardous material cars transported annually. Attachment B-5 shows all such rail line segments. Attachment B-6 shows the new key routes, that is, the rail line segments where the anticipated change in the volume of hazardous material cars would cause the rail line segment

to have more than 10,000 cars annually and the major key routes, where the annual number of cars is expected to at least double and be over 20,000 cars per year. Some of these rail line segments are already designated as key routes by the individual railroad companies.

Attachment B-7 shows the major highway/rail at-grade crossing accident frequency analysis by individual crossing for each rail line segment analyzed.

Attachment B-8 explains the history of the Applicants safety records, including train accidents and hazardous materials experience.

Attachment B-9 describes the CSX and NS safety programs and their hazardous materials programs.

Attachment B-10 contains the AAR Circular establishing the railroad industry norms for hazardous material rail transportation, with implementing instructions from NS and CSX.

**LIST OF APPENDIX B ATTACHMENTS**

- B-1 Accident Predictions for Rail Segments with a Projected Change of at Least Eight Trains Per Day
- B-2 Accident Predictions for Rail Segments with Passenger Trains and an Increase of at Least One Freight Train Per Day
- B-3 Accident Predictions for Rail Segments with a Projected Increase in Hazardous Material Being Transported
- B-4 Cars Switched Per Day at Terminals
- B-5 All Rail Line Segments with a Projected Increase in Hazardous Materials Activity
- B-6 New Key Route and Major Key Route Rail Line Segments
- B-7 Grade Crossing Safety Analysis
- B-8 Pre-Acquisition Conrail/CSX/NS Safety History
- B-9 Railroad Safety Programs
- B-10 Circular No. OT-55-B. Association of American Railroads. Recommended Railroad Operating Practices for Transportation of Hazardous Materials

**Attachment B-1**

**Accident Predictions for Rail Segments with a  
Projected Change of at Least Eight Trains Per Day**

Attachment B-1

Appendix B Safety

Accident Predictions for Rail Segments with a Projected Change of at Least Eight Freight Trains Per Day

Site ID	SEGMENTS		54		Passenger				Freight				Freight				Passenger			Hazardous Materials		
	Between	And	Pre Acq RR	Length (mi.)	Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre- Trains / day	Post- Trains / day	Char. Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)	
C-001	Anacostia	Virginia Ave	CR	3	0	0	0	0	19.3	28.6	9.3	12%	43%	263	184	--	--	--	30.9%	7.782	5.943	
C-002	Virginia Ave	Potomac Yard	CR	6	45	26	26	0	17.9	28.6	10.7	18%	53%	277	181	60%	538	337	30.7%	7.669	5.869	
<b>DC Total</b>				9																		
C-010	Barr Yd	Blue Island Jct	CSX	3	0	0	0	0	17.0	32.9	15.9	132%	97%	314	160	--	--	--	-6.3%	8.209	8.762	
N-033	Tilton	Decatur	NS	71	0	0	0	0	20.7	39.0	18.3	64%	95%	216	111	--	--	--	60.6%	10.530	6.555	
<b>IL Total</b>				74																		
C-020	Adams	Ft Wayne	CR	5	0	0	0	0	5.9	13.9	8.0	460%	131%	769	333	--	--	--	20.6%	107.705	89.320	
C-021	Evansville	Amqui	CSX	137	0	0	0	0	23.4	32.7	9.3	53%	43%	193	135	--	--	--	114.1%	5.667	2.647	
C-025	Vincennes	Evansville	CSX	53	0	0	0	0	22.3	30.8	8.5	75%	41%	203	144	--	--	--	107.0%	5.848	2.826	
C-027	Willow Creek	Pine Jct	CSX	12	2	2	0	0	20.1	36.6	16.5	105%	60%	225	141	-61%	1,781	4,524	126.8%	5.588	2.464	
N-040	Alexandria	Muncie	NS	16	0	0	0	0	2.6	11.8	9.2	370%	368%	1,793	383	--	--	--	201.7%	54.939	18.209	
N-041	Butler	Ft Wayne	NS	28	0	0	0	0	13.6	27.3	13.7	99%	107%	333	161	--	--	--	392.4%	19.896	4.040	
N-042	Control Pt 501	Indiana Hbr	CR	1	14	14	0	0	43.4	60.3	16.9	33%	41%	119	85	39%	5,516	3,970	-13.0%	2.302	2.646	
N-044	Ft Wayne	Peru	NS	53	0	0	0	0	19.0	34.9	15.9	100%	90%	236	124	--	--	--	316.0%	9.889	2.377	
N-045	Lafayette Jct	Tilton	NS	49	0	0	0	0	23.6	41.0	17.4	80%	80%	189	105	--	--	--	336.8%	10.499	2.404	
N-046	Peru	Lafayette Jct	NS	53	0	0	0	0	16.4	40.2	21.8	113%	128%	244	107	--	--	--	317.9%	9.896	2.368	
<b>IN Total</b>				407																		
C-036	Pt of Rocks	Harpers Ferry	CSX	13	25	13	17	0	33.3	41.6	8.3	30%	26%	155	122	25%	188	151	3.2%	8.787	8.511	
<b>MD Total</b>				13																		
C-040	Carleton	Toledo	CSX	26	0	0	0	0	21.9	33.1	11.2	61%	55%	207	133	--	--	--	140.5%	9.509	3.954	
N-121	West Detroit	Jackson	CR	74	6	6	0	0	2.9	12.1	9.2	313%	313%	1,522	369	317%	571	137	--	--	--	
S-020	Carleton	Ecorse	CR	20	0	0	0	0	2.0	11.2	9.2	2802%	453%	1,703	308	--	--	--	--	--	113,303	
<b>MI Total</b>				120																		
N-061	Ebenezer Jct	Buffalo	CR	6	0	0	0	0	0.0	11.4	11.4	62233%	--	--	403	--	--	--	#DIV/0!	#DIV/0!	8.445	
N-070	Buffalo Fw	Ashtabula	NS	128	0	0	0	0	13.0	25.1	12.1	118%	99%	349	175	--	--	--	239.1%	14.480	4.270	
<b>NY Total</b>				134																		
C-061	Berea	Greenwich	CR	42	0	0	0	0	14.5	54.2	39.7	250%	219%	301	94	--	--	--	179.4%	6.761	2.420	
C-062	Bucyrus	Adams	CR	114	0	0	0	0	5.9	13.9	8.0	412%	131%	769	333	--	--	--	4.0%	21.355	20.525	
C-064	Crestline	Bucyrus	CR	12	0	0	0	0	6.5	14.5	8.0	417%	118%	697	319	--	--	--	5.1%	35.861	34.106	
C-065	Deshler	Toledo	CSX	36	0	0	0	0	0.6	14.2	13.6	15913%	2415%	6,084	321	--	--	--	221.8%	14.301	4.444	
C-066	Deshler	Willow Creek	CSX	174	2	2	0	0	21.4	47.7	26.3	111%	97%	211	107	-52%	115	239	179.7%	5.582	1.996	
C-067	Greenwich	Crestline	CR	21	0	0	0	0	14.5	31.3	16.8	88%	82%	301	165	--	--	--	15.5%	5.507	4.766	
C-068	Greenwich	Willard	CSX	12	2	2	0	0	32.5	55.2	22.7	96%	73%	160	93	70%	5,270	3,103	279.8%	5.471	1.440	
C-069	Marcy	Short	CR	9	0	0	0	0	16.4	45.6	29.4	267%	172%	310	114	--	--	--	734.8%	33.400	4.001	
C-070	Marion	Fostoria	CSX	40	0	0	0	0	17.8	27.4	9.6	56%	58%	256	162	--	--	--	804.3%	34.756	3.843	
C-071	Marion	Ridgeway	CR	23	0	0	0	0	16.1	31.8	15.7	31%	94%	270	139	--	--	--	2.4%	4.055	3.959	
C-072	Mayfield	Marcy	CR	6	0	0	0	0	3.4	43.8	40.4	933%	1236%	1,344	101	--	--	--	--	--	3,534	
C-073	Quaker	Mayfield	CR	3	0	0	0	0	6.8	43.6	37.0	933%	562%	666	101	--	--	--	--	--	3,534	
C-074	Short	Berea	CR	4	0	0	0	0	13.4	47.3	33.9	578%	245%	380	110	--	--	--	743.4%	33.453	3.966	
C-075	Willard	Fostoria	CSX	37	2	2	0	0	32.5	54.0	21.5	97%	69%	160	95	66%	1,661	1,000	198.4%	6.116	2.050	
N-071	Pucyrus	Bellevue	NS	34	0	0	0	0	26.0	34.5	8.5	39%	35%	170	126	--	--	--	29.2%	9.280	7.184	
N-072	vermillion	Bellevue	NS	26	0	0	0	0	15.6	27.0	11.4	64%	78%	290	163	--	--	--	68.8%	12.216	7.237	
N-073	Fairgrounds (Columbus)	Bucyrus	NS	61	0	0	0	0	26.0	34.3	8.3	41%	35%	170	127	--	--	--	84.0%	8.493	4.615	
N-075	Ashtabula	Cleveland	NS	50	0	0	0	0	13.0	36.6	23.6	214%	195%	349	118	--	--	--	401.3%	15.169	3.026	
N-077	Oak Harbor	Miami	CR	22	4	4	0	0	48.0	61.5	13.5	20%	24%	101	82	28%	827	645	-13.8%	1.144	1.328	
N-079	Oak Harbor	Bellevue	NS	27	0	0	0	0	7.7	27.2	19.5	185%	270%	597	161	--	--	--	484.0%	35.624	6.101	

Attachment B-1

Appendix B Safety

Accident Predictions for Rail Segments with a Projected Change of at Least Eight Freight Trains Per Day

Site ID	SEGMENTS		54				Passenger				Freight				Freight			Passenger			Hazardous Materials		
	Between	And	Pre Acq RR	Length (m.)	Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre-Trains / day	Post-Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)		
N-080	Cleveland	Vermilion	NS	37	0	0	0	0	13.5	34.1	20.6	81%	164%	336	127	--	--	--	252.4%	12,245	3,475		
N-081	White	Cleveland	CR	11	2	2	0	0	12.5	29.7	17.2	131%	133%	407	174	138%	14,451	6,082	162.5%	13,373	5,096		
N-082	Youngstown	Ashtabula	CR	59	0	0	0	0	11.7	23.8	12.1	76%	103%	383	188	--	--	--	294.4%	46,438	11,775		
N-085	Bellevue	Sandusky Dock	NS	15	0	0	0	0	1.4	11.7	10.3	139%	738%	3,290	393	--	--	--	--	--	219,462		
N-086	Miami	Airline	CR	2	4	4	0	0	55.4	64.0	8.6	9%	12%	88	78	16%	7,878	6,819	-9.5%	1,904	2,103		
	<b>OH Total</b>			876																			
C-082	Rankin Jct	New Castle	CSX	51	0	0	0	0	28.9	38.3	9.4	74%	35%	157	116	--	--	--	25.4%	9,624	7,676		
C-083	RG	Field	CR	2	0	0	0	0	0.0	16.0	16.0	#DIV/0!	--	--	--	--	--	--	#DIV/0!	#DIV/0!	23,282		
C-085	Sinns	Brownsville	CSX	38	0	0	0	0	1.5	10.8	9.3	1055%	639%	1,301	176	--	--	--	--	--	--		
C-086	Sinns	Rankin Jct	CSX	9	2	2	0	0	30.8	40.2	9.4	77%	32%	172	130	31%	7,168	5,492	19.6%	11,145	9,321		
N-090	Rutherford	Harrisburg	CR	6	0	0	0	0	44.3	57.9	13.6	4%	28%	113	88	--	--	--	-25.6%	2,001	2,696		
N-091	Harrisburg	Riverton Jct	CR/NS	133	0	0	0	0	11.1	19.6	8.5	82%	81%	417	231	--	--	--	-7.1%	11,351	12,217		
S-040	Arsenal	Davis	AMTK	25	131	81	58	30	2.3	10.5	8.2	63%	357%	2,377	520	357%	712	156	33.3%	8,244	6,183		
S-042	South Philadelphia	Field	CR	5	0	0	0	0	8.2	21.1	12.9	303%	153%	472	187	--	--	--	583.7%	116,969	17,107		
	<b>PA Total</b>			269																			
N-100	Riverton Jct	Roanoke	NS	181	0	0	0	0	3.9	12.1	8.2	228%	219%	1,209	379	--	--	--	308.4%	97,630	23,905		
	<b>VA Total</b>			181																			
	<b>Grand Total</b>			2,083																			

**Attachment B-2**

**Accident Predictions for Rail Segments with Passenger Trains and an  
Increase of at Least One Freight Train Per Day**

Attachment B-2

Appendix B Safety

Accident Predictions for Rail Segments with Passenger Trains and an Increase of at Least One Freight Train Per Day

Site ID	SEGMENTS		93 Pre Acq RR	Length (mi.)	Passenger				Freight				Freight				Passenger			Hazardous Materials		
	Between	And			Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre-Trains / day	Post-Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)	
C-387	Mobile	New Orleans	CSX	143	1	1	0	0	20.6	22.7	2.1	48%	11%	220	197	10%	307	279	69.4%	2,701	1,594	
	<b>AL Total</b>				143																	
C-002	Virginia Ave	Potomac Yard	CR	6	45	26	26	0	17.9	28.6	10.7	18%	53%	277	181	60%	538	337	19.8%	5,544	4,627	
C-003	Washington	Pt of Rocks	CSX	43	20	8	17	0	23.8	30.8	7.0	48%	31%	218	166	29%	90	70	28.0%	6,352	4,964	
	<b>DC Total</b>				49																	
S-001	Davis	Perryville	AMTK	21	73	73	0	0	4.5	12.4	7.9	74%	176%	1,219	442	176%	3,037	1,102	9.3%	6,912	6,321	
	<b>DE Total</b>				21																	
C-382	Jacksonville	Baldwin	CSX	18	3	3	0	0	21.9	23.3	1.4	9%	7%	206	191	6%	684	643	-45.3%	14,579	26,638	
C-385	Pensacola	Flomaton	CSX	43	1	1	0	0	9.9	11.3	1.4	5%	15%	333	289	14%	1,418	1,242	20.2%	3,151	2,622	
C-400	Orlando	Auburndale	CSX	51	4	4	0	0	7.7	9.1	1.4	13%	19%	600	503	18%	492	417	1.1%	59,235	58,598	
C-401	Auburndale	Lakeland	CSX	12	4	4	0	0	7.2	8.6	1.4	1%	21%	643	532	19%	2,238	1,874	1.1%	33,155	32,795	
C-402	Lakeland	Winston	CSX	4	4	4	0	0	17.6	18.9	1.3	20%	8%	298	275	7%	12,399	11,546	-7.5%	7,653	8,270	
C-403	Winston	Plant City	CSX	5	4	4	0	0	9.8	11.1	1.3	10%	14%	470	410	13%	3,947	3,485	1.1%	11,077	10,960	
	<b>FL Total</b>				133																	
C-346	Savannah	Jesup	CSX	52	8	8	0	0	17.3	22.8	5.5	9%	34%	260	194	32%	101	76	37.3%	6,858	4,996	
C-381	Jesup	Folkston	CSX	54	8	8	0	0	10.3	12.4	2.1	0%	22%	443	364	20%	163	135	1.1%	11,016	10,891	
	<b>GA Total</b>				106																	
N-498	IC 95th St	Gibson City	NS	99	4	4	0	0	2.0	5.2	3.2	146%	164%	1,739	659	160%	651	250	-49.3%	16,447	32,458	
	<b>IL Total</b>				99																	
C-027	Willow Creek	Pine Jct	CSX	12	2	2	0	0	20.1	36.6	16.5	105%	60%	225	141	-61%	1,781	4,524	437.7%	4,169	775	
C-674	Indianapolis	Kraft	CR	3	1	1	0	0	7.8	9.8	2.0	5%	21%	578	476	26%	38,700	30,802	--	--	--	
C-675	Kraft	Avon	CR	6	1	1	0	0	9.6	11.6	2.0	10%	17%	468	400	21%	16,845	13,941	--	--	--	
N-042	Control Pt 501	Indiana Hbr	CR	1	14	14	0	0	43.4	60.3	16.9	33%	41%	119	85	39%	5,516	3,970	-13.0%	2,302	2,646	
N-047	Indiana Harbor	South Chgo	CR	8	16	16	0	0	41.1	45.2	4.1	22%	11%	125	113	10%	664	604	-11.7%	2,301	2,606	
	<b>IN Total</b>				30																	
C-242	NJ Cabin	Covington	CSX	121	1	1	0	0	7.5	8.6	1.1	14%	16%	621	536	15%	998	870	31.6%	8,301	6,307	
	<b>KY Total</b>				121																	
C-031	Alexandria Jct	Washington	CSX	5	22	6	22	0	23.9	30.8	6.9	63%	30%	220	169	29%	695	540	150.5%	19,522	7,793	
C-032	Baltimore	Relay	CSX	7	22	6	22	0	33.6	42.7	3.1	11%	9%	130	119	8%	300	279	12.2%	4,673	4,163	
C-033	Cumberland	Sinns	CSX	133	2	2	0	0	27.4	32.5	5.1	33%	21%	193	160	19%	545	460	8.3%	8,051	7,431	
C-034	Jessup	Alexandria Jct	CSX	17	22	6	22	0	33.4	37.1	3.7	45%	12%	154	138	11%	146	132	51.6%	4,437	2,927	
C-036	Pt of Rocks	Harpers Ferry	CSX	13	25	13	17	0	33.3	41.6	8.3	30%	26%	155	122	25%	188	151	-0.5%	6,555	6,589	
C-037	Relay	Jessup	CSX	7	22	6	22	0	33.1	37.0	3.9	26%	13%	156	138	12%	359	321	42.1%	4,502	3,169	
S-010	Baltimore	Bowie	AMTK	29	117	86	44	0	2.4	7.7	5.3	49%	221%	2,278	710	221%	816	254	--	--	26,982	
S-011	Bowie	Landover	AMTK	8	117	86	44	0	3.2	9.3	6.1	51%	191%	1,709	588	191%	2,110	726	--	--	26,982	
S-238	Perryville	Baltimore	AMTK	32	88	88	0	0	14.3	15.6	1.3	7%	#VALUE!	349	#VALUE!	9%	271	248	#VALUE!	30,548	#VALUE!	
	<b>MD Total</b>				251																	
N-120	Jackson	Kalamazoo	CR	67	8	8	0	0	5.4	12.0	6.6	162%	119%	810	370	122%	250	113	--	--	--	
N-121	West Detroit	Jackson	CR	74	6	6	0	0	2.9	12.1	9.2	313%	313%	1,522	369	317%	571	137	--	--	--	
N-497	Kalamazoo	Porter	CR	97	8	8	0	0	7.0	7.0	6.3	162%	888%	6,440	652	900%	1,334	133	--	--	--	
S-210	West Detroit	Dearborn	CR	5	6	6	0	0	1.6	3.4	1.8	0%	105%	1,123	549	113%	11,342	5,337	-100.0%	43,191	--	
	<b>MI Total</b>				243																	

Attachment B-2

Appendix B Safety

Accident Predictions for Rail Segments with Passenger Trains and an Increase of at Least One Freight Train Per Day

Site ID	SEGMENTS		93				Passenger				Freight				Freight				Passenger			Hazardous Materials		
	Between	And	Pre Acq RR	Length (mi.)	Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre- Trains / day	Post- Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)			
N-344	Meridian	Oliver Jct	NS	194	2	2	0	0	9.1	13.5	4.4	5%	51%	509	338	48%	243	164	-8.5%	6,198	6,770			
	<b>MS Total</b>			194																	6,770			
C-334	Weldon	Rocky Mt	CSX	37	10	10	0	0	19.6	25.5	5.9	12%	32%	228	172	30%	101	78	17.9%	2,838	2,407			
C-333	Rocky Mt	Contentnea	CSX	19	10	10	0	0	19.6	22.1	2.5	6%	14%	266	234	13%	855	758	37.8%	4,955	3,595			
C-336	Contentnea	Selma	CSX	22	10	10	0	0	18.2	21.0	2.8	2%	17%	246	211	15%	183	159	49.1%	4,588	3,077			
C-337	Selma	Fayetteville	CSX	49	6	6	0	0	20.4	21.6	1.2	0%	7%	220	206	6%	123	116	39.7%	4,313	3,088			
C-339	Pembroke	Dillon	CSX	21	6	6	0	0	15.7	17.2	1.5	24%	11%	289	261	10%	372	339	26.9%	8,166	6,434			
	<b>NC Total</b>			148																	8,166			
N-050	Croton	Ridgewood Jct	CR	17	64	3	64	54	4.7	7.9	3.2	51%	63%	1,032	634	68%	379	225	--	--	--			
N-064	Ridgewood Jct	Suffern	CR	11	94	94	0	0	7.6	10.6	3.0	123%	35%	635	470	39%	1,423	1,020	--	--	--			
S-030	Lane	Union	AMTK	7	277	120	184	88	3.4	11.0	7.6	29%	224%	1,607	497	224%	1,430	442	41.2%	17,454	12,363			
S-031	Midway	Morrisville	AMTK	17	175	103	82	48	3.4	11.0	7.6	46%	224%	1,607	497	224%	1,015	314	87.5%	37,091	19,782			
S-033	Union	Midway	AMTK	22	189	107	96	48	3.4	11.0	7.6	41%	224%	1,607	497	224%	743	230	33.3%	16,485	12,364			
	<b>NJ Total</b>			74																				
C-051	Chili	Frontier	CR	51	7	7	0	0	40.6	45.9	5.3	16%	8%	120	111	13%	224	198	8.4%	855	789			
C-053	Hoffmans	Utica	CR	66	7	7	0	0	38.3	44.8	6.5	17%	12%	127	114	17%	180	154	6.1%	3,562	3,358			
C-687	Buffalo	Draw	CR	2	2	2	0	0	55.8	58.5	2.7	20%	1%	89	89	5%	20,946	19,980	6.4%	1,426	1,340			
C-735	Utica	Syracuse	CR	51	9	9	0	0	36.9	43.4	6.5	14%	12%	132	118	16%	189	161	8.2%	1,034	955			
C-736	Syracuse	Syracuse Jct	CR	6	9	9	0	0	40.0	46.6	6.6	9%	11%	122	110	17%	1,603	1,376	10.9%	1,192	1,075			
C-737	Syracuse Jct	Solvay	CR	2	9	9	0	0	38.2	44.8	6.6	14%	12%	128	114	17%	4,617	3,937	9.6%	1,193	1,088			
C-738	Solvay	Lyons	CR	42	9	9	0	0	39.5	44.8	5.3	14%	8%	123	114	13%	211	186	8.5%	1,181	1,088			
C-739	Lyons	Fairport	CR	23	9	9	0	0	39.8	45.1	5.3	14%	8%	123	113	13%	379	334	8.5%	1,181	1,088			
C-740	Fairport	Rochester	CR	11	9	9	0	0	31.8	36.5	4.7	10%	9%	154	141	15%	1,037	903	8.8%	1,207	1,109			
C-741	Rochester	Chili	CR	13	9	9	0	0	33.4	36.9	3.5	10%	5%	146	139	10%	832	753	8.1%	876	811			
N-062	Suffern	Campbell Hall	CR	35	18	18	0	0	4.7	7.7	3.0	96%	60%	914	571	64%	292	178	47.47%	330,084	6,810			
N-063	Campbell Hall	Port Jervis	CR	30	18	18	0	0	7.9	12.0	4.1	56%	49%	541	364	52%	203	133	475.2%	329,012	6,781			
	<b>NY Total</b>			331																				
C-060	Ashtabula	Quaker	CR	47	2	2	0	0	46.3	54.2	5.9	5%	7%	101	94	12%	885	788	7.7%	812	754			
C-063	Cincinnati	Hamilton	CSX	21	1	1	0	0	28.2	31.2	3.0	16%	12%	188	168	11%	7,230	6,535	73.3%	7,331	4,231			
C-066	Deshler	Willow Creek	CSX	174	2	2	0	0	21.4	47.7	26.3	111%	97%	211	107	-52%	115	239	483.8%	4,232	725			
C-068	Greenwich	Willard	CSX	12	2	2	0	0	32.5	55.2	22.7	96%	73%	160	93	70%	5,270	3,103	547.9%	4,165	643			
C-075	Willard	Fostoria	CSX	37	2	2	0	0	32.5	54.0	21.5	97%	69%	160	95	66%	1,661	1,000	489.0%	4,656	790			
C-204	Youngstown	Sterling	CSX	79	2	2	0	0	32.6	33.9	1.3	24%	5%	160	152	4%	771	741	45.0%	6,143	4,236			
C-206	Fostoria	Deshler	CSX	26	2	2	0	0	34.0	37.9	3.9	15%	-4%	130	136	-7%	486	2,016	497.3%	5,198	870			
C-258	Hamilton	Indianapolis	CSX	99	1	1	0	0	3.0	5.0	2.0	34%	69%	1,571	930	67%	3,049	1,829	386.0%	71,904	14,794			
N-077	Oak Harbor	Miami	CR	22	4	4	0	0	48.0	61.5	13.5	20%	24%	101	82	28%	827	645	-13.9%	1,144	1,329			
N-081	White	Cleveland	CR	11	2	2	0	0	12.5	29.7	17.2	131%	133%	407	174	138%	14,451	6,082	162.5%	13,373	5,096			
N-084	Alliance	White	CR	46	2	2	0	0	26.4	30.1	3.7	5%	11%	187	169	14%	1,636	1,435	9.1%	3,937	3,609			
N-086	Miami	Airline	CR	2	4	4	0	0	55.4	64.0	8.6	9%	12%	88	78	16%	7,878	6,819	-9.4%	1,906	2,103			
	<b>OH Total</b>			575																				
C-081	New Castle	Youngstown	CSX	18	2	2	0	0	32.6	39.6	7.0	46%	23%	160	130	21%	3,331	2,742	42.9%	6,045	4,229			
C-086	Sinns	Rankin Jct	CSX	9	2	2	0	0	30.8	40.2	9.4	77%	32%	172	130	31%	7,168	5,492	9.6%	8,173	7,457			

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Appendix B Safety

Accident Predictions for Rail Segments with Passenger Trains and an Increase of at Least One Freight Train Per Day

Site ID	SEGMENTS		93		Passenger				Freight				Freight		Passenger			Hazardous Materials			
	Between	And	Pre Acq RR	Length (mi.)	Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre- Trains / day	Post- Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre- Acquisition Interval between Train Accidents Per Mile (years)	Post- Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre- Acquisition Interval between Passenger Collisions (years)	Post- Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre- Acquisition Interval between Mainline Hazardous Material Releases (years)	Post- Acquisition Interval between Mainline Hazardous Material Releases (years)
N-092	Harrisburg	Marysville	CR	9	4	4	0	0	42.4	49.1	6.7	18%	12%	115	102	16%	2,287	1,975	-39.5%	1,799	2,971
N-227	Frankford Jct	Pavonia	CR	4	28	28	0	0	4.7	5.7	1.0	-24%	18%	900	762	21%	2,227	1,836	-51.6%	9,081	18,772
N-263	Pitcairn	Jacks Run	CR	18	4	4	0	0	32.8	36.6	3.8	1%	8%	149	138	12%	1,478	1,325	-31.2%	2,137	3,105
S-040	Arsenal	Davis	AMTK	25	131	81	58	30	2.3	10.5	8.2	63%	357%	2,377	520	357%	712	156	30.6%	8,244	6,314
S-041	Morrisville	Zoo	AMTK	29	145	98	52	36	3.4	7.1	3.7	25%	109%	1,607	770	109%	809	387	91.7%	24,730	12,902
	<b>PA Total</b>			112																	
C-340	Dillon	Florence	CSX	31	6	6	0	0	15.6	19.0	3.4	3%	23%	290	235	22%	253	208	23.1%	6,886	5,593
C-341	Florence	Lane	CSX	49	6	6	0	0	12.7	16.6	3.9	8%	33%	359	270	31%	197	151	33.6%	8,008	5,994
C-342	Lane	St Stephen	CSX	8	6	6	0	0	16.2	19.9	3.7	7%	25%	279	224	23%	945	789	22.4%	7,311	5,973
C-343	St Stephen	Ashley Jct	CSX	39	6	6	0	0	12.7	16.5	3.8	7%	32%	359	272	30%	247	190	22.4%	7,340	5,995
C-344	Ashley Jct	Yemassee	CSX	54	6	6	0	0	16.7	20.6	3.9	17%	25%	271	216	23%	136	110	38.8%	6,495	4,678
C-345	Yemassee	Savannah	CSX	47	6	6	0	0	12.2	16.1	3.9	21%	34%	374	279	32%	214	162	30.0%	7,664	5,896
	<b>SC Total</b>			228																	
C-100	Doswell	Fredericksburg	CSX	37	18	18	0	0	16.2	22.8	6.6	28%	43%	353	248	41%	485	345	13.5%	5,071	4,469
C-101	Fredericksburg	Polomac Yard	CSX	49	30	21	12	0	16.3	23.4	7.1	29%	45%	349	240	44%	154	107	14.8%	3,759	3,274
C-102	Richmond	Doswell	CSX	24	18	18	0	0	17.8	24.8	7.0	22%	41%	292	207	39%	476	342	13.3%	3,361	2,965
C-103	S Richmond	Weldon	CSX	82	10	10	0	0	18.4	23.0	4.6	18%	27%	243	192	25%	49	39	14.4%	2,810	2,457
C-234	Clifton Forge	St Albans	CSX	195	1	1	0	0	9.8	10.9	1.1	5%	12%	540	481	11%	2,241	2,014	51.5%	38,440	25,365
N-315	Alexandria	Manassas	NS	22	17	5	16	0	7.8	9.6	1.8	19%	24%	660	551	23%	618	502	5017.5%	374,940	7,327
N-316	Manassas	Montview	NS	142	2	2	0	0	13.7	15.0	1.3	15%	11%	378	342	9%	1,021	933	-15.8%	8,957	10,641
N-317	Montview	Altavista	NS	21	2	2	0	0	15.4	19.6	4.2	33%	29%	292	226	27%	1,328	1,044	5.6%	7,222	6,840
	<b>VA Total</b>			572																	
C-202	Harpers Ferry	Cherry Run	CSX	32	12	12	0	0	33.3	40.6	7.3	29%	23%	155	126	22%	254	208	4.3%	6,027	5,776
C-203	Cherry Run	Cumberland	CSX	65	2	2	0	0	29.0	31.0	2.0	9%	8%	180	167	7%	1,054	986	-6.3%	5,526	5,897
C-235	St Albans	Barboursville	CSX	29	1	1	0	0	10.9	12.8	1.9	-3%	19%	485	409	17%	13,546	11,535	42.7%	22,600	15,840
C-236	Barboursville	Huntington	CSX	10	1	1	0	0	13.4	14.9	1.5	-2%	12%	393	350	11%	31,953	28,737	34.7%	21,321	15,826
C-237	Huntington	Kenova	CSX	8	1	1	0	0	15.5	16.8	1.3	8%	9%	340	310	8%	34,530	31,858	16.7%	8,521	7,298
	<b>WV Total</b>			144																	
	<b>Grand Total</b>			3,573																	

**Attachment B-3**

**Accident Predictions for Rail Segments with a Projected Increase in  
Hazardous Material Being Transported**

Attachment B-3

Appendix B Safety

Accident Predictions for Rail Segments with a Projected Increase in Hazardous Material Being Transported

Site ID	SEGMENTS		Pre Acq RR	Length (m.)	Passenger				Freight				Freight		Passenger			Hazardous Materials			
	Between	And			Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre-Trains / day	Post-Trains / day	Change Trains / day	Change MGST %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)
C-267	Decatur	Black Creek	CSX	89	0	0	0	0	22.5	23.8	1.3	55%	7%	233	218	--	--	--	110.1%	6,071	2,890
C-268	Black Crk	Birmingham	CSX	5	0	0	0	0	33.7	31.0	(2.7)	37%	-7%	154	167	--	--	--	109.8%	6,047	2,883
C-268	Birmingham	Parkwood	CSX	12	0	0	0	0	32.8	30.7	(2.1)	36%	-6%	159	168	--	--	--	291.6%	9,073	2,317
C-270	Parkwood	Montgomery	CSX	87	0	0	0	0	14.1	14.3	0.2	23%	2%	326	319	--	--	--	671.4%	25,308	3,281
C-271	Montgomery	Flomaton	CSX	110	0	0	0	0	16.1	16.0	1.9	46%	13%	284	252	--	--	--	1877.6%	39,271	1,986
C-374	Stevenson	Chattanooga	CSX	39	0	0	0	0	19.6	17.5	(2.1)	2%	-10%	268	298	--	--	--	40.6%	11,604	8,251
C-388	Flomaton	Mobile	CSX	59	1	1	0	0	25.1	25.6	0.7	24%	4%	208	201	3%	2,891	2,813	109.1%	2,984	1,427
C-387	Mobile	New Orleans	CSX	143	1	1	0	0	20.6	22.7	2.1	48%	11%	220	197	10%	307	279	83.6%	2,855	1,555
C-469	Montgomery	Western Jct	CSX	51	0	0	0	0	1.0	1.0	-	0%	1%	1,954	1,634	--	--	--	51.7%	83,914	61,926
N-001	Attalla	Norris Yard	NS	48	0	0	0	0	7.4	12.5	5.1	15%	72%	621	361	--	--	--	48.3%	13,144	8,883
N-337	Norris Yd	Austell	NS	142	2	2	0	0	19.1	14.5	(4.6)	-11%	-24%	234	309	-24%	158	209	28.2%	3,835	2,991
N-343	Burstal	Meridian	NS	140	2	2	0	0	16.2	16.2	-	14%	1%	282	280	5%	189	189	2.9%	4,155	4,036
N-397	Wilson	Memphis	NS	144	0	0	0	0	14.8	16.5	1.7	10%	13%	218	193	--	--	--	6.6%	4,513	4,232
N-412	Demopolis	Marion Jct	NS	38	0	0	0	0	2.0	2.0	-	0%	1%	1,783	1,752	--	--	--	--	--	109,896
				AL Total					1,107												
C-001	Anacostia	Virginia Ave	CR	3	0	0	0	0	19.3	28.6	9.3	12%	43%	263	184	--	--	--	30.9%	7,782	5,943
C-002	Virginia Ave	Potomac Yard	CR	6	45	26	26	0	17.9	28.6	10.7	16%	53%	277	181	60%	538	337	30.7%	7,689	5,889
C-003	Washington	Pt of Rocks	CSX	43	20	8	17	0	23.8	30.8	7.0	48%	31%	218	166	29%	90	70	47.1%	9,431	6,411
				DC Total					52												
C-201	Wilmere	Baltimore	CSX	66	0	0	0	0	26.9	26.6	1.9	14%	8%	194	180	--	--	--	53.1%	11,572	7,559
N-010	Bell	Edgemoor	CR	1	0	0	0	0	5.0	11.8	6.8	165%	129%	1,093	478	--	--	--	46.4%	26,250	17,686
S-001	Davis	Perryville	AMTK	21	73	73	0	0	4.5	12.4	7.9	74%	176%	1,219	442	176%	3,037	1,102	11.7%	6,912	6,190
				DE Total					90												
C-383	Baldwin	Chattahoochee	CSX	189	1	1	0	0	11.7	11.1	(0.6)	-13%	-5%	394	413	-5%	410	432	12.4%	5,819	5,177
C-384	Chattahoochee	Pensacola	CSX	161	1	1	0	0	10.3	9.7	(0.6)	-12%	-5%	449	474	-6%	548	580	30.5%	6,972	5,344
C-385	Pensacola	Flomaton	CSX	43	1	1	0	0	9.9	11.3	1.4	5%	15%	333	289	14%	1,416	1,242	27.3%	3,410	2,679
C-390	Callahan	Baldwin	CSX	21	0	0	0	0	17.7	18.3	0.6	15%	4%	297	285	--	--	--	11.0%	5,398	4,885
C-391	Baldwin	Starke	CSX	28	2	2	0	0	22.7	23.3	0.6	11%	4%	231	223	3%	3,367	3,280	7.6%	4,963	4,615
C-392	Starke	Vitfs	CSX	126	2	2	0	0	19.3	19.3	-	3%	1%	272	269	0%	817	817	7.5%	4,970	4,622
C-402	Lakeland	Winston	CSX	4	4	4	0	0	17.6	16.9	1.3	20%	6%	296	275	7%	12,399	11,546	-3.4%	8,503	8,798
C-403	Winston	Plant City	CSX	5	4	4	0	0	9.8	11.1	1.3	10%	14%	470	410	13%	3,947	3,485	4.6%	13,128	12,525
C-621	Newberry	Dunnellon	CSX	47	0	0	0	0	2.9	3.5	0.6	19%	22%	1,227	1,008	--	--	--	61.8%	7,004	4,328
C-623	Vitfs	Lakeland	CSX	19	2	2	0	0	16.4	16.4	-	5%	1%	278	278	0%	1,379	1,379	6.0%	5,974	5,634
C-629	Winston	Mulberry	CSX	12	0	0	0	0	8.9	8.9	-	0%	1%	523	519	--	--	--	6.4%	6,487	6,096
C-632	Achan	Green Bay	CSX	4	0	0	0	0	8.0	8.0	-	0%	1%	583	578	--	--	--	4.3%	11,907	11,410
				FL Total					857												
C-296	Cartersville	Atlanta	CSX	46	0	0	0	0	39.4	38.3	(1.1)	-3%	-2%	132	134	--	--	--	45.8%	6,037	4,140
C-297	Atlanta	Manchester	CSX	78	0	0	0	0	19.2	16.6	(2.6)	-3%	-13%	274	314	--	--	--	48.3%	22,530	15,186
C-298	Manchester	Waycross	CSX	203	0	0	0	0	27.9	26.0	(1.9)	9%	-6%	187	199	--	--	--	99.3%	9,543	4,789
C-346	Savannah	Jesup	CSX	52	8	8	0	0	17.3	22.8	5.5	9%	34%	280	194	32%	101	76	70.3%	12,491	7,335
C-347	Jesup	Waycross	CSX	39	0	0	0	0	7.2	7.8	0.6	10%	9%	649	593	--	--	--	66.4%	21,038	12,646
C-354	Athens	Atlanta	CSX	69	0	0	0	0	18.7	21.0	2.3	14%	13%	281	248	--	--	--	124.6%	6,081	2,707
C-355	Atlanta	Lagrange	CSX	70	0	0	0	0	15.3	16.5	1.2	10%	9%	300	275	--	--	--	1233.8%	35,379	2,652
C-356	Lagrange	Montgomery	CSX	100	0	0	0	0	11.6	11.2	(0.7)	7%	-5%	388	410	--	--	--	1882.7%	59,219	2,987
C-366	Camak	Atlanta	CSX	126	0	0	0	0	8.1	7.7	(0.4)	-10%	-4%	575	601	--	--	--	56.9%	39,885	25,296
C-367	Augusta	Camak	CSX	48	0	0	0	0	7.1	8.7	(0.4)	-5%	-5%	658	693	--	--	--	56.9%	39,744	25,334
C-378	Lagrange	Parkwood	CSX	142	0	0	0	0	13.5	13.5	-	21%	1%	341	339	--	--	--	122.0%	14,163	6,369

Attachment B-3

Appendix B Safety

Accident Predictions for Rail Segments with a Projected Increase in Hazardous Material Being Transported

Site ID	SEGMENTS		332	Passenger				Freight				Freight		Passenger			Hazardous Materials					
	Between	And		Pre Acq RR	Length (mi)	Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre-Trains / day	Post-Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)
C-377	Manchester	Lagrange	CSX	45	0	0	0	0	12.0	11.8	(0.4)	11%	-3%	385	396	..	..	..	115.5%	16,149	7,495	
C-378	Waycross	Thomasville	CSX	105	0	0	0	0	8.0	7.6	(0.4)	4%	-4%	563	609	..	..	..	180.1%	39,691	14,165	
C-380	Thomasville	Montgomery	CSX	210	0	0	0	0	7.9	6.2	(1.7)	0%	-21%	590	750	..	..	..	277.5%	44,659	11,832	
C-388	Waycross	Folkston	CSX	35	0	0	0	0	33.1	32.4	(0.7)	2%	-1%	157	159	..	..	..	20.4%	4,591	3,813	
C-389	Folkston	Callahan	CSX	22	8	8	0	0	43.9	44.6	0.7	-12%	2%	118	115	..	412	405	13.1%	4,121	3,845	
C-474	Bainbridge	Tallahassee	CSX	43	0	0	0	0	2.0	2.0	..	0%	1%	974	964	..	..	..	6.4%	9,863	9,268	
N-020	Howell	Spring	NS	1	0	0	0	0	33.3	40.4	7.1	21%	23%	154	125	..	..	..	27.6%	4,247	3,328	
N-022	Spring	Scherer Coal	NS	85	0	0	0	0	27.2	32.9	5.7	11%	23%	163	132	..	..	..	18.9%	3,693	3,160	
N-331	Cohutta	Austell	NS	108	0	0	0	0	32.8	36.5	3.7	7%	13%	134	119	..	..	..	18.4%	7,258	6,129	
N-332	Austell	Howell	NS	18	2	2	0	0	49.7	50.4	0.7	4%	2%	102	100	..	1%	2,499	2,464	31.9%	2,776	2,105
N-333	Scherer Coal	Macon Jct	NS	20	0	0	0	0	21.9	27.4	5.5	19%	27%	204	160	..	..	..	27.4%	4,010	3,147	
N-334	Macon Jct	Brosnan Yd	NS	2	0	0	0	0	37.0	40.0	3.0	3%	9%	138	128	..	..	..	37.2%	3,930	2,864	
N-335	C of G Jct	Langdale Yd	NS	148	0	0	0	0	15.3	16.5	1.2	12%	9%	211	193	..	..	..	3.8%	3,382	3,260	
N-379	Valdosta	Occidental	NS	42	0	0	0	0	5.4	3.8	(1.6)	-1%	-26%	611	866	..	..	..	3.7%	3,919	3,779	
				1,833																		
C-011	Blue Island Jct	59th Street	CSX	15	0	0	0	0	19.5	22.9	3.4	37%	19%	274	231	..	..	..	..	..	24,433	
C-263	Dolton	Danville	CSX	108	0	0	0	0	20.2	21.6	1.4	29%	8%	260	241	..	..	..	68.4%	7,507	4,458	
C-264	Danville	Terre Haute	CSX	57	0	0	0	0	22.8	23.9	1.3	28%	7%	232	217	..	..	..	65.3%	6,954	4,207	
C-417	Blue Island Jct	Clearing	CSX	15	0	0	0	0	17.0	17.4	0.4	5%	3%	310	300	..	..	..	54.9%	25,557	16,503	
C-418	Joliet	Ottawa	CSX	45	0	0	0	0	3.0	3.0	..	1%	1%	1,188	1,178	..	..	..	5.5%	8,002	7,584	
C-476	Chrisman	Decatur	CSX	69	0	0	0	0	1.8	2.1	0.3	8%	16%	1,083	918	..	..	..	21.4%	37,495	30,888	
N-033	Tilton	Decatur	NS	71	0	0	0	0	20.7	39.0	18.3	64%	95%	218	111	..	..	..	80.6%	10,530	6,555	
N-312	Kankakee	Streator	CR	49	0	0	0	0	4.9	5.0	0.1	11%	-1%	929	934	..	..	..	118.6%	107,918	49,360	
N-477	Decatur	Moberly	NS	209	0	0	0	0	10.8	17.3	6.5	77%	64%	422	258	..	..	..	137.3%	38,833	16,384	
N-490	Gibson City	Bement	NS	41	0	0	0	0	5.4	7.0	1.6	49%	31%	858	653	..	..	..	55.6%	27,093	17,411	
N-492	Decatur	Taylorville	NS	30	0	0	0	0	9.7	16.7	7.0	24%	76%	338	191	..	..	..	25.7%	14,430	11,484	
N-499	Calumet	Landers	NS	8	0	0	0	0	23.2	18.0	(5.2)	-9%	-22%	222	285	..	..	..	33.6%	8,723	6,531	
				715																		
C-021	Evansville	Amqui	CSX	137	0	0	0	0	23.4	32.7	9.3	53%	43%	193	135	..	..	..	114.1%	5,667	2,847	
C-023	Pine Jct	Barr Yd	CSX	11	0	0	0	0	27.8	33.3	5.7	58%	22%	192	158	..	..	..	56.8%	9,007	5,743	
C-025	Vincennes	Evansville	CSX	53	0	0	0	0	22.3	30.8	8.5	75%	41%	203	144	..	..	..	107.0%	5,848	2,826	
C-027	Willow Creek	Pine Jct	CSX	12	2	2	0	0	20.1	38.6	18.5	105%	60%	225	141	..	1,781	4,524	126.8%	5,588	2,484	
C-254	Munster	Monon	CSX	82	1	1	0	0	2.5	2.5	..	19%	1%	777	769	..	0%	3,895	439.2%	62,312	11,557	
C-255	Monon	Lafayette	CSX	30	1	1	0	0	3.0	3.0	..	25%	1%	647	640	..	0%	6,708	304.4%	46,700	11,548	
C-258	Lafayette	Crawfordsville	CSX	29	1	1	0	0	7.8	7.8	..	7%	1%	821	817	..	0%	4,109	303.0%	112,769	27,984	
C-265	Terre Haute	Vincennes	CSX	54	0	0	0	0	22.6	28.5	5.9	56%	28%	232	182	..	..	..	83.7%	7,083	3,857	
C-475	Hillsdale	Chrisman	CSX	16	0	0	0	0	1.8	2.1	0.3	8%	18%	1,083	918	..	..	..	21.4%	37,465	30,888	
C-678	Avon	Clermont	CR	4	1	1	0	0	8.8	8.9	0.1	6%	-3%	501	518	..	1%	25,727	25,438	..	20,788	
C-677	Clermont	Crawfordsville	CR	34	1	1	0	0	7.4	7.5	0.1	1%	-3%	597	616	..	1%	3,578	3,531	..	20,809	
C-893	Willow Creek	Ivanhoe	CR	13	0	0	0	0	9.6	11.4	1.8	6%	14%	459	403	..	..	..	159.4%	30,464	11,745	
N-040	Alexandria	Muncie	NS	16	0	0	0	0	2.6	11.8	9.2	370%	368%	1,793	383	..	..	..	201.7%	54,939	18,209	
N-041	Butler	Ft Wayne	NS	28	0	0	0	0	13.6	27.3	13.7	99%	107%	333	161	..	..	..	392.4%	19,896	4,040	
N-044	Ft Wayne	Peru	NS	53	0	0	0	0	19.0	34.9	15.9	90%	90%	238	124	..	..	..	316.0%	9,889	2,377	
N-045	Lafayette Jct	Tilton	NS	49	0	0	0	0	23.6	41.0	17.4	80%	80%	189	105	..	..	..	336.8%	10,499	2,404	
N-046	Peru	Lafayette Jct	NS	53	0	0	0	0	18.4	40.2	21.8	113%	128%	244	107	..	..	..	317.9%	9,896	2,368	
N-305	Goshen	Alexandria	CR	99	0	0	0	0	4.7	6.8	2.1	47%	41%	949	672	..	..	..	27.3%	9,642	7,572	
N-485	Muncie	Ivorydale	NS	106	0	0	0	0	20.8	20.5	(0.1)	19%	0%	217	217	..	..	..	60.9%	6,223	5,111	

Attachment B-3

Appendix B Safety

Accident Predictions for Rail Segments with a Projected Increase in Hazardous Material Being Transported

Site ID	SEGMENTS		332		Passenger				Freight				Freight			Passenger			Hazardous Materials		
	Between	And	Pre Acq RR	Length (mi)	Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre-Trains / day	Post-Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)
	<b>IN Total</b>			<b>859</b>																	
C-239	Big Sandy Jct	Ashland	CSX	8	1	1	0	0	32.5	30.5	(2.0)	-3%	-5%	160	169	-6%	21,958	23,398	15.5%	5,013	4,340
C-240	Ashland	Russell	CSX	4	1	1	0	0	32.5	32.5	-	-4%	1%	160	159	0%	32,937	32,937	11.6%	5,013	4,492
C-241	Russell	NJ Cabin	CSX	19	1	1	0	0	20.8	18.8	(2.0)	2%	-9%	252	277	-10%	10,834	11,987	20.8%	5,797	4,800
C-272	Anchorage	Winchester	CSX	95	0	0	0	0	2.8	3.3	0.7	39%	28%	748	583	-	-	-	203.6%	93,600	30,827
C-275	N Hazard	Lothair	CSX	2	0	0	0	0	10.9	10.9	-	0%	1%	425	422	-	-	-	40.8%	8,274	5,876
C-287	Latonia	Anchorage	CSX	86	0	0	0	0	15.0	12.7	(2.3)	-13%	-15%	351	412	-	-	-	121.3%	12,377	5,593
C-288	Anchorage	Louisville	CSX	13	0	0	0	0	20.6	18.3	(2.3)	-2%	-11%	255	285	-	-	-	120.1%	11,600	5,270
C-289	Louisville	Amqui	CSX	173	0	0	0	0	18.8	17.4	(1.4)	-9%	-7%	280	300	-	-	-	117.6%	11,971	5,501
C-291	Covington	Latonia	CSX	1	0	0	0	0	30.3	28.9	(1.4)	3%	-4%	172	179	-	-	-	109.9%	7,628	3,834
C-292	Latonia	Winchester	CSX	93	0	0	0	0	17.1	16.0	(1.1)	7%	-6%	308	326	-	-	-	58.0%	16,687	10,550
C-293	Winchester	Sinks	CSX	56	0	0	0	0	24.6	23.3	(1.3)	4%	-5%	213	223	-	-	-	128.6%	25,479	11,138
C-294	Sinks	Corbin	CSX	35	0	0	0	0	22.9	21.6	(1.3)	2%	-5%	229	241	-	-	-	114.5%	23,903	11,145
C-295	Corbin	Cartersville	CSX	283	0	0	0	0	27.3	26.1	(1.2)	-2%	-4%	191	199	-	-	-	107.6%	22,459	10,808
C-317	N Hazard	Duane	CSX	4	0	0	0	0	2.7	2.7	-	0%	1%	1,319	1,311	-	-	-	108.6%	24,028	11,517
N-327	SJ Jct	Harriman	NS	144	0	0	0	0	37.9	35.0	(2.9)	0%	-7%	135	145	-	-	-	12.7%	3,971	3,524
N-415	Louisville	SJ Jct	NS	67	0	0	0	0	13.7	11.2	(2.5)	-6%	-18%	236	288	-	-	-	7.8%	5,952	5,520
	<b>KY Total</b>			<b>1,061</b>																	
N-346	Oliver Jct	Oliver Yd	NS	2	0	0	0	0	15.0	16.1	3.1	7%	22%	301	246	-	-	-	2.2%	3,280	3,209
	<b>LA Total</b>			<b>2</b>																	
C-720	Boston Beacon Park	Frammingham	CR	18	41	41	0	0	9.3	8.7	(0.6)	9%	-10%	445	497	-6%	243	259	2.3%	24,825	24,260
C-723	Worcester	Palmer	CR	39	4	4	0	0	20.3	19.9	(0.4)	10%	-7%	243	261	-2%	1,103	1,125	1.0%	12,339	12,213
C-725	Springfield	Westfield	CR	11	2	2	0	0	22.3	22.1	(0.2)	3%	-6%	221	235	-1%	8,100	8,173	1.3%	8,520	8,413
C-726	Westfield	Selkirk	CR	85	2	2	0	0	24.3	24.1	(0.2)	7%	-6%	203	215	-1%	962	970	2.4%	9,933	9,700
	<b>MA Total</b>			<b>153</b>																	
C-030	Alexandria Jct	Benning	CSX	6	0	0	0	0	18.7	24.3	5.6	27%	32%	167	141	-	-	-	23.8%	5,855	4,728
C-031	Alexandria Jct	Washington	CSX	5	22	6	22	0	23.9	30.8	6.9	63%	30%	220	169	-29%	695	540	38.4%	46,805	10,066
C-032	Baltimore	Relay	CSX	7	22	6	22	0	39.6	42.7	3.1	11%	9%	130	119	-8%	300	278	25.6%	9,231	7,347
C-033	Cumberland	Sinns	CSX	133	2	2	0	0	27.4	32.5	5.1	33%	21%	193	160	-19%	545	460	14.9%	10,676	9,286
C-034	Jessup	Alexandria Jct	CSX	17	22	6	22	0	33.4	37.1	3.7	45%	12%	154	138	-11%	146	132	122.3%	10,353	4,657
C-035	Landover	Anacostia	CR	5	0	0	0	0	3.4	9.1	5.7	117%	155%	1,770	693	-	-	-	943.6%	557,713	53,443
C-037	Relay	Jessup	CSX	7	22	6	22	0	33.1	37.0	3.9	26%	13%	156	138	-12%	359	321	102.1%	10,711	5,300
C-243	Cumberland	W Virginia C	CSX	28	0	0	0	0	14.0	16.6	2.6	32%	20%	329	274	-	-	-	35.0%	23,624	17,504
S-010	Baltimore	Bowie	AMTK	29	117	86	44	0	2.4	7.7	5.3	49%	221%	2,278	710	-221%	816	254	900.1%	296,826	29,681
S-011	Bowie	Landover	AMTK	8	117	86	44	0	3.2	9.3	6.1	51%	191%	1,709	586	-191%	2,110	726	900.1%	296,823	29,680
S-238	Perryville	Baltimore	AMTK	32	88	88	0	0	14.3	15.6	1.3	7%	9%	349	320	-9%	271	248	50.0%	45,821	30,546
	<b>MD Total</b>			<b>278</b>																	
C-040	Carleton	Toledo	CSX	28	0	0	0	0	21.9	33.1	11.2	61%	55%	207	133	-	-	-	140.5%	9,539	3,954
C-214	Detroit	Plymouth	CSX	25	0	0	0	0	15.1	12.3	(2.8)	-13%	-18%	304	373	-	-	-	59.2%	14,745	9,262
C-218	Saginaw	Flint	CSX	29	0	0	0	0	10.0	12.2	2.2	18%	24%	464	376	-	-	-	93.2%	32,383	16,761
C-219	Flint	Holly	CSX	28	0	0	0	0	12.8	14.0	1.2	22%	10%	360	326	-	-	-	77.6%	10,755	6,055
C-220	Holly	Wixom	CSX	20	0	0	0	0	11.3	12.5	1.2	20%	12%	409	368	-	-	-	77.6%	10,776	6,066
C-221	Wixom	Plymouth	CSX	12	0	0	0	0	12.2	12.9	0.7	14%	7%	379	355	-	-	-	72.3%	10,448	6,063
C-222	Plymouth	Wayne	CSX	8	0	0	0	0	23.6	26.5	2.9	4%	13%	222	196	-	-	-	50.3%	9,804	6,521
C-223	Wayne	Carleton	CSX	15	0	0	0	0	22.8	24.8	2.0	30%	10%	230	209	-	-	-	50.3%	9,807	6,525
C-424	Waverly	Grand Haven	CSX	20	0	0	0	0	2.8	2.8	-	0%	1%	695	687	-	-	-	51.6%	93,569	61,702
C-425	Grand Haven	Muskegon	CSX	13	0	0	0	0	1.7	1.7	-	0%	1%	1,147	1,135	-	-	-	51.7%	93,759	61,825

Attachment B-3

Accident Predictions for Rail Segments with a Projected Increase in Hazardous Material Being Transported

Site ID	SEGMENTS		332		Passenger				Freight				Freight		Passenger			Hazardous Materials			
	Between	And	Pre Acq RR	Length (ms)	Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre-Trains / day	Post-Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)
N-476	Oakwood	Butler	NS	107	0	0	0	0	15.2	17.3	2.1	23%	15%	297	258	--	--	--	48.7%	20,445	13,746
S-020	Carleton	Ecorse	CR	20	0	0	0	0	2.0	11.2	9.2	2602%	453%	1,703	308	--	--	--	--	--	113,303
	<b>MI Total</b>			<b>323</b>																	
N-478	Moberly	CA Jct	NS	94	0	0	0	0	18.8	25.0	7.3	42%	41%	278	197	--	--	--	63.1%	20,876	12,799
N-479	CA Jct	N Kansas City	NS	31	0	0	0	0	30.0	31.3	1.3	11%	5%	147	139	--	--	--	30.7%	20,118	15,392
	<b>MO Total</b>			<b>125</b>																	
C-323	Bostic	Spartanburg	CSX	32	0	0	0	0	13.8	13.8	-	0%	1%	382	379	--	--	--	9.4%	15,995	14,822
C-330	Charlotte	Bostic	CSX	73	0	0	0	0	7.8	7.8	-	10%	1%	814	809	--	--	--	11.0%	17,871	16,100
C-331	Monroe	Charlotte	CSX	24	0	0	0	0	12.0	12.4	0.4	10%	4%	385	399	--	--	--	11.4%	12,251	10,997
C-334	Weldon	Rocky Mt	CSX	37	10	10	0	0	19.8	25.5	5.9	12%	32%	228	172	30%	101	78	30.1%	3,897	2,995
C-335	Rocky Mt	Contentnea	CSX	19	10	10	0	0	19.6	22.1	2.5	6%	14%	268	234	13%	855	758	61.3%	7,338	4,548
C-338	Contentnea	Selma	CSX	22	10	10	0	0	18.2	21.0	2.8	2%	17%	246	211	15%	183	159	78.5%	6,837	3,830
C-337	Selma	Fayetteville	CSX	49	8	8	0	0	20.4	21.8	1.2	0%	7%	220	206	6%	123	116	62.3%	6,238	3,843
C-338	Fayetteville	Pembroke	CSX	31	8	8	0	0	22.1	22.2	0.1	3%	1%	238	233	0%	794	791	85.9%	6,816	4,109
C-339	Pembroke	Dillon	CSX	21	8	8	0	0	15.7	17.2	1.5	24%	11%	289	281	10%	372	339	61.7%	17,557	10,858
C-348	Pembroke	Wilmington	CSX	81	0	0	0	0	3.5	5.0	1.5	14%	44%	1,387	948	--	--	--	34.8%	11,687	8,670
C-349	Hamlet	Pembroke	CSX	34	0	0	0	0	11.8	13.1	1.3	1%	12%	448	399	--	--	--	48.1%	5,192	3,554
C-350	Hamlet	Monroe	CSX	53	0	0	0	0	20.4	23.0	2.6	4%	14%	257	228	--	--	--	131.2%	5,244	2,288
C-351	Monroe	Clinton	CSX	92	0	0	0	0	13.1	15.8	2.5	28%	21%	352	282	--	--	--	241.6%	8,889	2,598
C-357	Hamlet	McBee	CSX	50	2	2	0	0	3.4	3.3	(0.1)	7%	-2%	1,038	1,083	-3%	1,685	1,738	183.4%	25,699	9,758
C-381	Hamlet	Dillon	CSX	42	0	0	0	0	8.9	7.7	(1.2)	4%	-13%	523	801	--	--	--	84.3%	25,483	13,117
C-444	Weldon	Franklin	CSX	41	0	0	0	0	7.7	7.4	(0.3)	-15%	-3%	614	835	--	--	--	20.8%	90,363	74,787
C-446	Rocky Mt	Parmele	CSX	32	0	0	0	0	3.2	3.2	-	0%	1%	607	601	--	--	--	6.4%	4,922	4,625
C-448	Parmele	Elmer	CSX	38	0	0	0	0	2.0	2.0	-	0%	1%	974	984	--	--	--	8.8%	5,085	4,753
N-319	Greensboro	Linwood	NS	41	8	8	0	0	20.2	18.3	(1.9)	18%	-9%	254	279	-9%	657	725	18.0%	6,350	5,382
N-347	Greensboro	Raleigh Yd	NS	83	4	4	0	0	5.0	5.1	0.1	-1%	3%	916	891	2%	488	457	7.4%	11,301	10,521
N-353	Goldsboro	New Bern	NS	58	0	0	0	0	0.9	0.9	-	0%	1%	3,942	3,917	--	--	--	--	--	22,099
N-380	Salisbury	Asheville	NS	142	0	0	0	0	6.8	5.4	(1.2)	-11%	-18%	498	608	--	--	--	28.1%	11,201	8,747
N-381	Asheville	Leadvale	NS	74	0	0	0	0	8.4	7.8	(0.8)	-5%	-9%	548	600	--	--	--	30.2%	14,610	11,223
	<b>NC Total</b>			<b>1,189</b>																	
C-758	Ridgefield Heights	Newburgh	CR	45	0	0	0	0	23.6	24.8	1.2	19%	0%	209	209	--	--	--	37.1%	5,965	4,350
C-789	Trenton	Port Reading	CR	25	0	0	0	0	15.7	11.4	(4.3)	-8%	-31%	277	403	--	--	--	159.6%	16,831	6,408
N-209	Oak Island	E Rail T V	CR	8	0	0	0	0	10.4	15.2	4.8	22%	43%	423	295	--	--	--	47.1%	9,048	6,152
S-030	Lane	Union	AMTK	7	277	120	184	88	3.4	11.0	7.6	29%	224%	1,607	497	224%	1,430	442	47.1%	17,454	11,869
S-031	Midway	Morrisville	AMTK	17	175	103	82	48	3.4	11.0	7.6	48%	224%	1,607	497	224%	1,015	314	66.7%	32,970	19,782
S-032	PN	Bayway	CR	9	0	0	0	0	10.9	16.2	5.3	62%	48%	412	281	--	--	--	109.5%	14,728	7,030
S-033	Union	Midway	AMTK	22	189	107	96	48	3.4	11.0	7.6	41%	224%	1,607	497	224%	743	230	33.3%	16,485	12,384
S-211	Nave	N Bergen	CR	8	0	0	0	0	4.4	1.4	(3.0)	-97%	-69%	1,015	3,321	--	--	--	183.8%	16,881	6,398
S-212	N Bergen	Ridgefield Hts	CR	8	0	0	0	0	23.1	22.1	(1.0)	4%	-8%	214	231	--	--	--	39.7%	5,968	4,272
S-217	Bayway	PD	CR	8	0	0	0	0	8.0	7.7	1.7	47%	26%	756	802	--	--	--	23.1%	22,670	18,414
S-218	PD	Wood	CR	3	0	0	0	0	4.0	4.0	-	1%	-4%	452	470	--	--	--	123.8%	57,827	25,838
S-220	Nave	CP Green	CR	4	0	0	0	0	18.5	18.5	(2.0)	1%	-14%	288	311	--	--	--	82.9%	8,965	4,901
S-221	Nave	Croxtan	CR	2	0	0	0	0	18.5	15.5	(3.0)	0%	-19%	288	331	--	--	--	68.0%	8,965	5,401
S-222	Green	Oak Island	CR	1	0	0	0	0	18.5	18.5	-	11%	-3%	288	277	--	--	--	75.8%	8,965	5,098
S-223	Hack	Croxtan	CR	1	0	0	0	0	17.7	8.2	(9.5)	-52%	-56%	245	555	--	--	--	69.7%	38,875	21,727
S-224	Croxtan	North Bergen	CR	3	0	0	0	0	19.1	19.2	0.1	13%	-3%	259	287	--	--	--	18.8%	7,828	6,528
S-230	NK	Boundbrook	CR	22	56	56	0	0	36.0	25.5	(10.5)	-8%	-32%	134	196	-29%	208	291	13.7%	4,910	4,316

Attachment B-3

Appendix B Safety

Accident Predictions for Rail Segments with a Projected Increase in Hazardous Material Being Transported

Site ID	SEGMENTS		332		Passenger				Freight				Freight				Passenger				Hazardous Materials		
	Between	And	Pre Acq RR	Length (m.)	Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre- Trains / day	Post- Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)		
S-231	Boundbrook	Pt Reading Jct	CR	3	0	0	0	0	34.2	27.4	(6.8)	3%	-23%	144	186	--	--	--	2.0%	4,350	4,264		
S-235	Woodbury	Paulsboro	CR	8	0	0	0	0	3.2	3.2	-	0%	-4%	566	589	--	--	--	1.9%	5,427	5,325		
	<b>NJ Total</b>			<b>193</b>																			
C-051	Chili	Frontier	CR	51	7	7	0	0	40.6	45.9	5.3	16%	8%	120	111	13%	224	198	16.8%	2,795	2,394		
C-052	CP Sycamore	Black Rock	CR	8	0	0	0	0	21.5	28.5	5.0	31%	18%	235	189	--	--	--	162.8%	23,321	8,669		
C-053	Hoffmans	Utica	CR	66	7	7	0	0	38.3	44.8	6.5	17%	12%	127	114	17%	150	154	14.8%	4,001	3,485		
C-054	Selkirk	Hoffmans	CR	25	0	0	0	0	36.7	45.2	6.5	13%	11%	127	114	--	--	--	14.4%	3,068	2,679		
C-687	Puttalo	Draw	CR	2	2	2	0	0	55.8	58.5	2.7	20%	1%	89	89	0%	20,948	19,980	9.1%	4,112	3,768		
C-68	Draw	Buff Crk Jct	CR	1	2	2	0	0	55.8	52.5	(3.3)	4%	-11%	87	97	-6%	35,609	37,847	8.0%	3,167	2,932		
C-689	Buff Crk Jct	Buff Seneca	CR	3	2	2	0	0	55.8	52.5	(3.3)	-2%	-11%	87	97	-6%	10,791	11,469	7.1%	2,956	2,760		
C-690	Buff Seneca	Ashtabula	CR	123	2	2	0	0	50.1	50.8	0.7	-2%	-3%	97	101	1%	323	319	6.1%	3,170	2,933		
C-735	Utica	Syracuse	CR	51	9	9	0	0	36.9	43.4	6.5	14%	12%	132	118	18%	189	181	10.1%	2,673	2,303		
C-736	Syracuse	Syracuse Jct	CR	6	9	9	0	0	40.0	46.6	6.6	9%	11%	122	110	17%	1,603	1,378	27.7%	4,132	3,235		
C-737	Syracuse Jct	Solvay	CR	2	9	9	0	0	38.2	44.8	6.6	14%	12%	128	114	17%	4,617	3,937	22.2%	4,133	3,382		
C-738	Solvay	Lyons	CR	42	9	9	0	0	39.5	44.8	5.3	14%	8%	123	114	13%	211	186	16.5%	3,948	3,382		
C-739	Lyons	Fairport	CR	23	9	9	0	0	39.8	45.1	5.3	14%	8%	123	113	13%	379	334	16.8%	3,948	3,381		
C-740	Fairport	Rochester	CR	11	9	9	0	0	31.8	36.5	4.7	10%	9%	154	141	15%	1,037	903	18.3%	4,238	3,581		
C-741	Rochester	Chili	CR	13	9	9	0	0	33.4	36.9	3.5	10%	5%	146	139	10%	832	753	17.5%	3,025	2,576		
C-742	Frontier	Buffalo	CR	4	9	9	0	0	52.8	49.5	(3.3)	-3%	-11%	92	103	-6%	1,630	1,738	12.3%	2,906	2,586		
C-748	Black Rock	Niagara Falls	CR	21	7	7	0	0	23.0	22.0	(1.0)	12%	-9%	185	202	-4%	214	224	1.6%	5,749	5,681		
C-749	Fairport	Genesee Jct	CR	14	0	0	0	0	11.4	11.2	(0.2)	-4%	-6%	385	410	--	--	--	13.8%	66,868	58,741		
C-750	Genesee Jct	Chili	CR	7	0	0	0	0	11.4	11.8	0.4	-1%	-1%	385	389	--	--	--	13.9%	66,868	58,695		
C-751	Syracuse	Woodard	CR	4	0	0	0	0	10.0	10.0	-	1%	-4%	440	461	--	--	--	-0.6%	15,949	16,048		
C-752	Woodard	Philadelphia	CR	84	0	0	0	0	7.0	7.0	-	1%	-4%	633	663	--	--	--	3.1%	14,621	14,181		
C-753	Newburgh	Selkirk	CR	80	0	0	0	0	22.2	23.4	1.2	13%	0%	223	222	--	--	--	37.1%	5,968	4,353		
N-061	Ebenezer Jct	Buffalo	CR	6	0	0	0	0	0.0	11.4	11.4	82233%			403	--	--	#DIV/0!	#DIV/0!	8,445			
N-062	Suffern	Campbell Hall	CR	35	18	18	0	0	4.7	7.7	3.0	96%	60%	914	571	64%	292	178	4747.0%	330,084	6,810		
N-063	Campbell Hall	Port Jervis	CR	30	18	18	0	0	7.9	12.0	4.1	56%	49%	541	364	52%	203	133	4752.0%	329,012	6,781		
N-065	Corning	Buffalo	CR	128	0	0	0	0	13.8	20.6	7.0	27%	49%	321	216	--	--	--	540.0%	47,635	7,443		
N-070	Buffalo Fw	Ashtabula	NS	128	0	0	0	0	13.0	25.1	12.1	118%	99%	349	175	--	--	--	239.1%	14,480	4,270		
N-245	Port Jervis	Binghamton	CR	128	0	0	0	0	7.9	12.0	4.1	69%	49%	560	376	--	--	--	4755.3%	335,863	6,917		
N-246	Binghamton	Waverly	CR	42	0	0	0	0	13.0	19.9	6.9	47%	51%	337	223	--	--	--	4769.4%	333,667	6,853		
N-247	Waverly	Corning	CR	36	0	0	0	0	16.4	21.4	5.0	38%	28%	265	207	--	--	--	2426.3%	186,180	8,578		
N-473	Buffalo	Black Rock	NS	7	0	0	0	0	10.6	5.1	(5.5)	-58%	-52%	292	748	--	--	--	201.9%	184.7/13	61,183		
	<b>NY Total</b>			<b>1,177</b>																			
C-060	Ashtabula	Quaker	CR	47	2	2	0	0	48.3	54.2	5.9	5%	7%	101	94	12%	885	788	15.2%	2,384	2,069		
C-061	Berea	Greenwich	CR	42	0	0	0	0	14.5	54.2	39.7	250%	219%	301	94	--	--	--	176.4%	6,761	2,420		
C-063	Cincinnati	Hamilton	CSX	21	1	1	0	0	28.2	31.2	3.0	16%	12%	188	168	11%	7,230	6,535	87.7%	7,674	4,088		
C-065	Deshler	Toledo	CSA	36	0	0	0	0	0.6	14.2	13.6	15913%	2415%	8,084	321	--	--	--	221.6%	14,301	4,444		
C-066	Deshler	Willow Creek	CSX	174	2	2	0	0	21.4	47.7	26.3	111%	97%	211	107	-52%	115	239	179.7%	5,582	1,996		
C-067	Greenwich	Crestline	CR	21	0	0	0	0	14.5	31.3	16.8	86%	82%	301	165	--	--	--	15.5%	5,507	4,768		
C-068	Greenwich	Willard	CSX	12	2	2	0	0	32.5	55.2	22.7	96%	73%	180	93	70%	5,270	3,103	279.8%	5,471	1,440		
C-069	Marcy	Short	CR	9	0	0	0	0	16.4	45.8	29.4	267%	172%	310	114	--	--	--	734.8%	33,400	4,001		
C-070	Marion	Fostoria	CSX	40	0	0	0	0	17.8	27.4	9.6	56%	58%	158	162	--	--	--	804.3%	34,758	3,843		
C-072	Mayfield	Marcy	CR	6	0	0	0	0	3.4	43.8	40.4	933%	1236%	344	101	--	--	--			3,534		
C-073	Quaker	Mayfield	CR	3	0	0	0	0	8.8	43.8	35.0	933%	562%	666	601	--	--	--			3,534		
C-074	Short	Berea	CR	4	0	0	0	0	13.4	47.3	33.9	576%	245%	380	110	--	--	--	743.4%	33,453	3,966		

Attachment B-3

Appendix B Safety

Accident Predictions for Rail Segments with a Projected Increase in Hazardous Material Being Transported

Site ID	SEGMENTS		Pre Acq RR	Length (mi.)	Passenger			Freight				Freight		Passenger			Hazardous Materials					
	Between	And			Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre-Trains / day	Post-Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)	
C-075	Willard	Fostoria	CSX	37	2	2	0	0	32.5	54.0	21.5	97%	86%	160	95	86%	1,661	1,000	198.4%	6,116	2,050	
C-204	Youngstown	Sterling	CSX	79	2	2	0	0	32.6	33.9	1.3	24%	5%	160	152	4%	771	741	65.5%	8,103	4,897	
C-205	Sterling	Greenwich	CSX	37	2	2	0	0	32.5	32.9	0.4	13%	2%	160	157	1%	1,648	1,628	90.1%	7,468	3,929	
C-206	Fostoria	Deshler	CSX	29	2	2	0	0	34.0	37.9	3.9	15%	-4%	130	136	-76%	486	2,016	99.5%	7,645	3,632	
C-224	Hamilton	Dayton	CSX	34	0	0	0	0	25.4	26.5	1.1	1%	5%	208	198	..	..	..	58.7%	6,823	4,298	
C-225	Dayton	Sidney	CSX	37	0	0	0	0	22.6	24.6	2.0	42%	10%	232	211	..	..	..	57.0%	9,830	4,351	
C-226	Sidney	Lima	CSX	35	0	0	0	0	22.6	15.3	(7.3)	0%	-32%	232	341	..	..	..	28.3%	6,954	5,506	
C-227	Lima	Deshler	CSX	33	0	0	0	0	26.5	14.9	(11.6)	-8%	-44%	197	351	..	..	..	31.7%	6,585	5,000	
C-228	Fostoria	Toledo	CSX	29	0	0	0	0	33.3	37.4	4.1	19%	14%	156	138	..	..	..	294.8%	18,144	4,596	
C-229	Columbus	Marion	CSX	20	0	0	0	0	17.8	17.4	(0.4)	10%	-1%	295	300	..	..	..	152.4%	27,373	10,845	
C-258	Hamilton	Indianapolis	CSX	99	1	1	0	0	3.3	5.0	2.0	34%	69%	1,571	930	67%	3,049	1,829	426.5%	71,904	13,658	
C-290	Cincinnati	Covington	CSX	6	1	1	0	0	35.9	33.6	(2.3)	7%	-6%	145	154	-6%	19,878	21,239	73.9%	4,049	2,328	
C-438	Newark	Columbus	CSX	35	0	0	0	0	1.8	1.8	-	0%	1%	1,219	1,206	..	..	..	40.9%	5,683	4,033	
C-525	W Marietta	Relief	CSX	27	0	0	0	0	1.8	1.8	-	0%	1%	1,083	1,072	..	..	..	34.8%	12,498	9,272	
C-884	Darby	Mounds	CR	3	0	0	0	0	2.2	2.0	(0.2)	-48%	-14%	624	964	..	..	..	..	..	46,341	..
C-685	Mounds	Scioto	CR	6	0	0	0	0	2.2	2.0	(0.2)	-49%	-14%	624	964	..	..	..	..	..	46,341	..
C-695	CP Maumee	Oak	CR	1	0	0	0	0	15.2	4.0	(11.2)	-97%	-75%	327	1,319	..	..	..	215.1%	21,122	6,702	
N-071	Bucyrus	Bellevue	NS	34	0	0	0	0	26.0	34.5	8.5	39%	35%	170	126	..	..	..	29.2%	9,280	7,184	
N-072	Vermilion	Bellevue	NS	26	0	0	0	0	15.6	27.0	11.4	64%	78%	290	163	..	..	..	68.8%	12,216	7,237	
N-073	Fairgrounds (Columbus)	Bucyrus	NS	61	0	0	0	0	26.0	34.3	8.3	41%	35%	170	127	..	..	..	84.0%	6,493	4,615	
N-074	Cleveland	Shortline Jct	CR	7	0	0	0	0	2.0	4.2	2.2	1543%	104%	2,572	1,258	..	..	..	..	..	25,585	..
N-075	Ashtabula	Cleveland	NS	50	0	0	0	0	13.0	36.6	23.6	214%	195%	349	118	..	..	..	401.3%	15,169	3,026	
N-076	Ivorydale	Cincinnati	NS	6	0	0	0	0	31.3	36.0	4.7	31%	16%	167	143	..	..	..	69.9%	8,829	5,197	
N-078	Dayton	Ivorydale	CR	46	0	0	0	0	11.7	16.9	7.2	44%	57%	426	271	..	..	..	16.7%	20,666	17,721	
N-079	Oak Harbor	Bellevue	NS	27	0	0	0	0	7.7	27.2	19.5	185%	270%	597	161	..	..	..	484.0%	35,624	6,101	
N-080	Cleveland	Vermilion	NS	37	0	0	0	0	13.5	34.1	20.6	81%	184%	336	127	..	..	..	252.4%	12,245	3,475	
N-081	White	Cleveland	CR	11	2	2	0	0	12.5	20.7	17.2	131%	133%	407	174	138%	14,451	6,082	162.5%	13,373	5,096	
N-082	Youngstown	Ashtabula	CR	59	0	0	0	0	11.7	23.8	12.1	76%	103%	383	188	..	..	..	294.4%	46,438	11,775	
N-084	Alliance	White	CR	46	2	2	0	0	26.4	30.1	3.7	5%	11%	187	169	14%	1,636	1,435	9.4%	3,955	3,617	
N-267	Columbus	Charleston	CR	185	0	0	0	0	4.1	3.4	(0.7)	-8%	-20%	1,090	1,357	..	..	..	1.0%	16,085	15,822	
N-326	Cincinnati	SJ Jct	NS	112	0	0	0	0	31.0	28.0	(3.0)	4%	-9%	165	182	..	..	..	44.8%	6,033	4,167	
		OH Total		1,667																		
C-434	Chatham	Fargo	CSX	7	0	0	0	0	1.2	1.2	-	0%	1%	1,627	1,610	..	..	..	10.7%	6,939	6,073	
C-435	Chatham	Sarnia	CSX	53	0	0	0	0	1.2	1.2	-	0%	1%	1,627	1,610	..	..	..	6.4%	9,880	9,284	
		ON Total		60																		
C-080	Field	Belmont	CR	4	0	0	0	0	6.2	15.8	7.6	80%	85%	483	282	..	..	..	344.0%	130,172	29,317	
C-081	New Castle	Youngstown	CSX	18	2	2	0	0	32.6	39.6	7.0	46%	23%	160	130	21%	3,331	2,742	51.8%	17,312	11,407	
C-082	Rankin Jct	New Castle	CSX	51	0	0	0	0	28.9	38.3	9.4	74%	35%	157	116	..	..	..	25.4%	9,624	7,676	
C-083	RG	Field	CR	2	0	0	0	0	0.0	16.0	16.0	#DIV/0!	..	..	288	..	..	..	#DIV/0!	#DIV/0!	23,282	
C-084	RG	Wilsmere	CSX	26	0	0	0	0	22.9	26.4	3.5	23%	17%	167	169	..	..	..	50.4%	10,626	7,067	
C-086	Sinns	Rankin Jct	CSX	9	2	2	0	0	30.8	40.2	9.4	77%	32%	177	130	31%	7,168	5,492	19.6%	11,145	9,321	
C-764	Parik Jct	Belmont	CR	1	0	0	0	0	17.0	18.3	1.3	4%	2%	292	265	..	..	..	47.9%	5,767	3,912	
C-785	Belmont	West Falls	CR	1	0	0	0	0	24.5	27.1	2.6	13%	5%	201	191	..	..	..	51.4%	5,505	3,636	
C-786	West Falls	CP Newtown Jct	CR	4	0	0	0	0	11.1	11.4	0.3	18%	-2%	396	403	..	..	..	238.2%	20,904	6,182	
N-093	Harrisburg	Shocks	CR	22	0	0	0	0	2.2	6.0	3.8	143%	165%	2,284	862	..	..	..	44.8%	180,666	124,766	
N-095	Rochester	Youngstown	CR	39	0	0	0	0	12.6	17.7	5.1	17%	37%	306	223	..	..	..	289.1%	43,754	11,246	
N-203	Bethlehem	Allentown	CR	3	0	0	0	0	17.2	13.3	(3.9)	-8%	-25%	252	339	..	..	..	35.5%	15,094	11,139	

Attachment B-3

Appendix B Safety

Accident Predictions for Rail Segments with a Projected Increase in Hazardous Material Being Transported

Site ID	SEGMENTS		332		Passenger				Freight				Freight			Passenger			Hazardous Materials		
	Between	And	P.e Acq RR	Length (mi.)	Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre-Trains / day	Post-Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)
N-204	Allentown	Burn	CR	3	0	0	0	0	24.9	21.3	(3.6)	13%	-17%	198	240	--	--	--	1.8%	4,160	4,086
N-216	Reading	Reading Belt Jct	CR	2	0	0	0	0	6.0	4.9	(1.1)	46%	-21%	756	953	--	--	--	108.6%	33,134	15,869
N-223	Zoo	Arsenal	CR	2	0	0	0	0	5.4	9.3	3.9	107%	69%	842	497	--	--	--	369.7%	86,248	18,362
N-225	Eastwick	Marcus Hook	CR	12	0	0	0	0	3.0	7.8	4.8	67%	157%	1,526	594	--	--	--	50.4%	28,901	19,211
S-040	Arsenal	Davis	AMTK	25	131	81	58	30	2.3	10.5	8.2	83%	357%	2,377	520	357%	712	156	33.3%	8,244	6,183
S-041	Morrisville	Zoo	AMTK	29	145	98	52	36	3.4	7.1	3.7	25%	109%	1,607	770	109%	809	387	91.7%	24,730	12,902
S-042	South Philadelphia	Field	CR	5	0	0	0	0	8.2	21.1	12.9	303%	153%	472	187	--	--	--	583.7%	116,969	17,107
S-232	Park Jct	Frankford Jct	CR	6	0	0	0	0	7.8	10.7	2.9	27%	34%	567	423	--	--	--	25.2%	13,996	11,176
S-233	Frankford Jct	Camden	CR	4	0	0	0	0	7.8	10.7	2.9	29%	34%	567	423	--	--	--	25.2%	13,996	11,176
S-234	Eastwick	Lester	CR	6	0	0	0	0	3.2	3.2	-	1%	-2%	1,062	1,090	--	--	--	4.0%	11,027	13,607
	PA Total			274																	
C-324	Laurins	Spartanburg	CSX	38	0	0	0	0	13.6	12.8	(0.8)	-17%	-5%	388	409	--	--	--	7.3%	23,995	22,372
C-340	Dillon	Florence	CSX	31	6	6	0	0	15.6	19.0	3.4	3%	23%	290	235	22%	253	208	39.7%	12,109	8,669
C-341	Florence	Lane	CSX	49	6	6	0	0	12.7	16.6	3.9	8%	33%	350	270	31%	197	151	60.5%	14,681	9,149
C-342	Lane	St Stephen	CSX	8	6	6	0	0	16.2	19.9	3.7	7%	25%	279	224	23%	945	769	37.5%	12,533	9,117
C-343	St Stephen	Ashley Jct	CSX	39	6	6	0	0	12.7	16.5	3.8	7%	32%	359	272	30%	247	190	42.6%	13,050	9,150
C-344	Ashley Jct	Yemassee	CSX	54	6	6	0	0	16.7	20.6	3.9	17%	25%	271	216	23%	136	110	62.4%	14,030	7,693
C-345	Yemassee	Savannah	CSX	47	6	6	0	0	12.2	16.1	3.9	21%	34%	374	279	32%	214	162	65.8%	16,025	9,663
C-352	Clinton	Greenwood	CSX	26	0	0	0	0	17.1	19.6	2.5	7%	16%	308	266	--	--	--	190.3%	8,156	2,809
C-353	Greenwood	Athens	CSX	81	0	0	0	0	16.1	16.8	0.7	8%	18%	327	277	--	--	--	139.6%	8,500	2,710
C-358	McBee	Columbia	CSX	108	2	2	0	0	4.4	4.4	-	9%	1%	800	794	0%	603	603	144.6%	23,811	9,735
C-359	Columbia	Fairfax	CSX	76	2	2	0	0	3.9	3.7	(0.2)	3%	-4%	496	517	-5%	966	1,018	80.6%	6,807	5,423
C-360	Fairfax	Savannah	CSX	62	2	2	0	0	12.4	11.6	(0.8)	-6%	-6%	371	394	-6%	559	597	21.0%	23,612	19,520
C-362	Dillon	Andrews	CSX	74	0	0	0	0	4.3	4.2	(0.1)	-13%	-2%	1,110	1,129	--	--	--	20.9%	90,966	75,274
C-365	Remour	Charleston	CSX	10	0	0	0	0	1.6	1.6	-	0%	1%	1,219	1,206	--	--	--	8.9%	14,427	13,251
N-359	Columbia	Millen	NS	135	0	0	0	0	6.0	5.2	(0.8)	-30%	-13%	549	630	--	--	--	38.4%	30,833	22,273
	SC Total			840																	
C-090	Amqui	Nashville	CSX	16	0	0	0	0	40.8	48.4	7.6	30%	21%	108	89	--	--	--	77.0%	3,767	2,129
C-371	Mckenzie	Memphis	CSX	116	0	0	0	0	10.1	12.4	2.3	8%	24%	459	369	--	--	--	36.6%	17,808	13,033
C-373	Nashville	Stevenson	CSX	113	0	0	0	0	20.6	21.1	0.5	4%	3%	255	247	--	--	--	108.4%	6,076	2,915
C-375	Chattanooga	Cartersville	CSX	87	0	0	0	0	17.7	17.4	(0.3)	-2%	-1%	297	300	--	--	--	40.7%	11,613	8,252
N-326	Hannan	Citico Jct	NS	74	0	0	0	0	26.6	26.1	0.5	4%	7%	193	181	--	--	--	16.7%	6,459	5,535
N-329	Citico Jct	Ooltewah	NS	12	0	0	0	0	37.4	44.0	7.0	18%	20%	138	115	--	--	--	28.6%	4,609	3,584
N-330	Ooltewah	Cohutta	NS	12	0	0	0	0	27.9	33.4	5.5	13%	22%	158	130	--	--	--	21.2%	7,450	6,145
N-340	Citico Jct	Chattanooga	NS	2	0	0	0	0	63.2	55.7	(7.5)	-4%	-11%	80	90	--	--	--	27.3%	3,148	2,471
N-341	Wauhatchie	Attalla	NS	82	0	0	0	0	6.5	11.9	5.4	16%	87%	508	271	--	--	--	37.9%	8,802	6,385
N-388	Bulls Gap	New Line	NS	16	0	0	0	0	18.2	17.7	(0.5)	25%	-2%	247	252	--	--	--	40.3%	7,526	5,367
N-387	New Line	Sevier Yd	NS	32	0	0	0	0	21.9	21.1	(0.8)	25%	-3%	204	210	--	--	--	49.7%	5,225	3,492
N-388	Sevier Yd	Cleveland	NS	68	0	0	0	0	15.1	17.1	2.0	28%	14%	213	166	--	--	--	63.0%	7,858	4,821
N-389	Cleveland	Ooltewah	NS	14	0	0	0	0	9.2	12.6	3.4	68%	39%	498	358	--	--	--	56.4%	10,007	6,400
N-392	New Line	Leadvale	NS	11	0	0	0	0	4.9	5.7	0.8	-6%	17%	945	804	--	--	--	37.4%	14,100	10,262
N-393	Hannan	Sevier Yd	NS	58	0	0	0	0	15.6	9.4	(6.2)	-11%	-40%	290	483	--	--	--	5.4%	8,142	6,676
N-395	Wauhatchie	Sheffield	NS	154	0	0	0	0	10.2	10.8	0.6	19%	7%	319	299	--	--	--	39.2%	8,453	6,075
N-399	Bulls Gap	Frisco	NS	41	0	0	0	0	16.0	12.1	(3.9)	-3%	-33%	250	373	--	--	--	56.6%	15,061	9,606
	TN Total			928																	
C-100	Doswell	Fredericksburg	CSX	37	18	18	0	0	16.2	22.8	6.6	28%	43%	353	248	41%	485	345	23.2%	7,015	5,694
C-101	Fredericksburg	Potomac Yard	CSX	49	30	21	12	0	16.3	23.4	7.1	29%	45%	349	240	44%	154	107	25.2%	5,224	4,171

Attachment B-3

Appendix B: Safety

Accident Predictions for Rail Segments with a Projected Increase in Hazardous Material Being Transported

Site ID	SEGMENTS		332		Passenger				Freight				Freight			Passenger			Hazardous Materials		
	Between	And	Pre Acq RR	Length (mi.)	Total / day	Amtrak / day	Commuter Mon-Fri	Commuter Sat-Sun	Pre- Trains / day	Post- Trains / day	Change Trains / day	Change MGT %	Percent Increase in Reportable Freight Train Accidents	Pre-Acquisition Interval between Train Accidents Per Mile (years)	Post-Acquisition Interval between Train Accidents Per Mile (years)	Post Acquisition % Increase in Passenger Train Accidents	Pre-Acquisition Interval between Passenger Collisions (years)	Post-Acquisition Interval between Passenger Collisions (years)	Percent Increase in Reportable Mainline Hazardous Material Releases	Pre-Acquisition Interval between Mainline Hazardous Material Releases (years)	Post-Acquisition Interval between Mainline Hazardous Material Releases (years)
C-102	Richmond	Doswell	CSX	24	18	18	0	0	17.8	24.8	7.0	22%	41%	292	207	39%	478	342	23.1%	4,649	3,777
C-103	S. Richmond	Weldon	CSX	82	10	10	0	0	18.4	23.0	4.6	18%	27%	243	192	25%	49	39	23.8%	3,843	3,109
C-233	Rivanna Jct	Clifton Forge	CSX	229	0	0	0	0	9.8	9.7	(0.1)	-1%	0%	540	541	--	--	--	38.8%	48,073	34,624
C-234	Clifton Forge	St Albans	CSX	195	1	1	0	0	9.8	10.9	1.1	5%	12%	540	481	11%	2,241	2,014	81.8%	38,440	23,780
N-100	Riverton Jct	Roanoke	NS	181	0	0	0	0	3.9	12.1	8.2	228%	210%	1,209	379	--	--	--	308.4%	97,630	23,905
N-315	Alexandria	Manassas	NS	22	17	5	16	0	7.8	9.8	1.8	19%	24%	660	531	23%	618	502	5017.5%	374,940	7,327
N-317	Montview	Altavista	NS	21	2	2	0	0	15.4	19.8	4.2	33%	29%	292	226	27%	1,328	1,044	5.6%	7,222	8,840
N-385	Walton	Bulls Gap	NS	187	0	0	0	0	8.6	10.3	1.7	83%	21%	533	440	--	--	--	40.5%	19,474	13,865
N-406	Frisco	Kingsport	NS	6	0	0	0	0	4.0	4.0	-	38%	1%	1,180	1,151	--	--	--	71.5%	17,652	10,291
N-420	Roanoke	Salem	NS	7	0	0	0	0	34.3	40.4	6.1	20%	19%	149	125	--	--	--	29.6%	11,676	9,011
N-421	Salem	Walton	NS	33	0	0	0	0	28.2	32.1	3.9	9%	15%	182	158	--	--	--	34.8%	12,480	9,259
N-432	Poe ML	Petersburg	NS	3	0	0	0	0	8.4	8.0	(0.4)	-25%	-4%	546	570	--	--	--	53.7%	16,697	10,868
VA Total				1,076																	
C-202	Harpers Ferry	Cherry Run	CSX	32	12	12	0	0	33.3	40.6	7.3	29%	23%	155	126	22%	254	208	9.7%	8,079	7,382
C-235	St Albans	Barboursville	CSX	29	1	1	0	0	10.9	12.8	1.9	-3%	19%	485	409	17%	13,546	11,535	46.0%	21,345	14,622
C-236	Barboursville	Huntington	CSX	10	1	1	0	0	13.4	14.9	1.5	-2%	12%	393	350	11%	31,953	28,737	38.3%	20,199	14,908
C-237	Huntington	Kenova	CSX	6	1	1	0	0	15.5	16.8	1.3	8%	9%	340	310	8%	34,530	31,658	20.8%	6,336	6,900
C-238	Kenova	Big Sandy Jct	CSX	1	1	1	0	0	32.5	33.2	0.7	11%	3%	163	158	2%	131,748	128,988	20.6%	10,657	8,839
C-245	MIK Jct	Grafton	CSX	28	0	0	0	0	9.4	12.0	2.6	36%	29%	494	382	--	--	--	35.0%	23,767	17,604
C-246	Grafton	Berkeley Jct	CSX	2	0	0	0	0	10.8	10.8	-	11%	1%	429	428	--	--	--	34.5%	23,722	17,832
C-247	Berkeley Jct	Short Line Jct	CSX	21	0	0	0	0	3.8	3.8	-	-8%	1%	1,258	1,250	--	--	--	34.3%	30,384	22,603
C-248	Brooklyn Jct	Short Line Jct	CSX	58	0	0	0	0	4.6	4.4	(0.2)	-5%	-4%	769	799	--	--	--	34.2%	22,313	16,624
C-249	Parkersburg	Brooklyn Jct	CSX	55	0	0	0	0	4.5	4.5	-	0%	1%	1,060	1,053	--	--	--	23.8%	12,992	10,496
C-250	Parkersburg	Huntington	CSX	119	0	0	0	0	5.3	5.1	(0.2)	0%	-3%	898	927	--	--	--	64.0%	12,970	7,908
N-288	Charleston	Dickinson	CR	14	0	0	0	0	4.3	4.6	0.3	-5%	4%	1,060	1,016	--	--	--	67.9%	39,292	23,401
WV Total				375																	
Grand Total				15,033																	

**Attachment B-4**

**Cars Switched Per Day at Terminals**

**Attachment B-4  
Cars Switched Per Day at Terminals**

Appendix B Safety

State	City	Yard Name	Road	Type	Oct '96 Base	Total	Change	Change (%)	Pre Acquisition Interval between Hazardous Material Releases	Post Acquisition Interval between Hazardous Material Releases	Projected Percent Change in Hazardous Material Accident Frequency
GA	Atlanta	Hulsey	CSXT	IM Ramp	523	603	80	15.3%	139	146	-5%
GA	Atlanta	Inman	NS	IM Ramp	569	712	143	25.1%	290	234	24%
<b>GA Total</b>					<b>1,092</b>	<b>1,315</b>	<b>223</b>				
IL	Chgo 47-51 St TV		CR	IM Ramp	532	737	205	38.5%	137	120	13%
IL	Landers		NS	IM Ramp	412	506	94	22.8%	396	325	22%
IL	Chicago	59th St	CSXT	IM Ramp	0	815	815	N/A	>40,000	109	N/A
<b>IL Total</b>					<b>944</b>	<b>2,058</b>	<b>1,114</b>				
KY	Louisville	Buechel	NS	IM Ramp	119	172	53	44.5%	1,314	921	43%
<b>KY Total</b>					<b>119</b>	<b>172</b>	<b>53</b>				
LA	New Orleans	New Orleans	NS	IM Ramp	64	127	63	98.4%	2,391	1,234	94%
<b>LA Total</b>					<b>64</b>	<b>127</b>	<b>63</b>				
MD	Baltimore TV		CR	IM Ramp	108	174	66	61.1%	636	484	31%
<b>MD Total</b>					<b>108</b>	<b>174</b>	<b>66</b>				
MI	Melvindale ML		NS	ML Ramp	257	314	57	22.2%	625	515	21%
<b>MI Total</b>					<b>257</b>	<b>314</b>	<b>57</b>				
MO	St Louis RH		NS	IM Ramp	188	381	193	102.7%	845	427	98%
MO	Voltz RH		NS	IM Ramp	229	349	120	52.4%	699	465	50%
<b>MO Total</b>					<b>417</b>	<b>730</b>	<b>313</b>				
NJ	ERail TV		CR	IM Ramp	98	483	385	392.9%	699	181	286%
NJ	Little Ferry		CRN	IM Ramp	215	392	177	82.3%	327	221	48%
NJ	South Kearny		CRN	IM Ramp	440	488	48	10.9%	164	179	-8%
<b>NJ Total</b>					<b>753</b>	<b>1,363</b>	<b>610</b>				
OH	Bellevue		NS	IM Ramp	0	65	65	N/A	>40,000	2,355	N/A
OH	Columbus-Discovery Park		NS	IM Ramp	131	184	53	40.5%	1,198	863	39%
OH	Toledo		NS	IM Ramp	104	141	37	35.6%	1,496	1,116	34%
<b>OH Total</b>					<b>235</b>	<b>390</b>	<b>155</b>				
PA	Rutherford TC		CR	IM Ramp	68	398	330	485.3%	994	218	356%
PA	Pittsburgh TV		CR	IM Ramp	0	114	114	N/A	>40,000	729	N/A
PA	Allentown TV		CR	IM Ramp	39	138	99	253.8%	1,700	606	181%
PA	Morrisville TC		CR	IM Ramp	164	347	183	111.6%	425	249	71%
PA	Greenwich		CRS	IM Ramp	0	272	272	N/A	>40,000	315	N/A
<b>PA Total</b>					<b>271</b>	<b>1,269</b>	<b>998</b>				
TN	Memphis		CSXT	IM Ramp	120	196	76	63.3%	575	432	33%
<b>TN Total</b>					<b>120</b>	<b>196</b>	<b>76</b>				
<b>Grand Total Intermodal</b>					<b>4,380</b>	<b>8,108</b>	<b>3,728</b>				
AL	Birmingham	Boyles	CSXT	Hump	993	1,186	193	19.4%	75	76	-2%
<b>AL Total</b>					<b>993</b>	<b>1,186</b>	<b>193</b>				
GA	Doraville		NS	Regional	174	222	48	27.6%	911	720	27%
<b>GA Total</b>					<b>174</b>	<b>222</b>	<b>48</b>				
IL	Colehour		CR	Regional	74	94	20	27.0%	916	878	4%
<b>IL Total</b>					<b>74</b>	<b>94</b>	<b>20</b>				
IN	Fi Wayne		NS	Regional	283	583	300	106.0%	570	284	101%
IN	Curtis		CSXT		110	145	35	32.0%	625	577	8%
<b>IN Total</b>					<b>393</b>	<b>728</b>	<b>335</b>				
MI	Detroit	Rougemere	CSXT	Reg.	335	585	250	74.6%	213	150	42%
<b>MI Total</b>					<b>335</b>	<b>585</b>	<b>250</b>				
MO	Luther		NS	Regional	239	327	88	36.8%	670	495	35%
<b>MO Total</b>					<b>239</b>	<b>327</b>	<b>88</b>				
NY	Buffalo Jct	Bison	NS	Regional	389	672	283	72.8%	419	247	69%
<b>NY Total</b>					<b>389</b>	<b>672</b>	<b>283</b>				
OH	Toledo	Stanley	CR	H	475	1,282	807	170.0%	152	71	116%
OH	Airline		CR	ML, IM, H	0	520	520	N/A	>40,000	168	N/A
OH	Conneaut		NS	Regional	30	74	44	146.7%	4,967	2,078	139%
OH	Homestead		NS	Regional	326	469	143	43.9%	497	350	42%
<b>OH Total</b>					<b>831</b>	<b>2,345</b>	<b>1,514</b>				
PA	Harrisburg		CR	ML, IM, H	117	246	129	110.3%	589	347	70%
PA	Greenwich		CRS	Regional	265	501	236	89.1%	267	175	53%
PA	Rutherford TC		CR	TC Ramp	69	120	51	73.9%	980	693	41%
<b>PA Total</b>					<b>451</b>	<b>867</b>	<b>416</b>				
TN	Memphis	Leewood	CSXT	Flat	120	153	33	27.8%	575	547	5%
<b>TN Total</b>					<b>120</b>	<b>153</b>	<b>33</b>				
AL	Gadsden		CSXT		146	132	(14)	-9.6%	476	633	-25%

**Attachment B-4**  
**Cars Switched Per Day at Terminals**

Appendix B Safety

State	City	Yard Name	Road	Type	Oct '96 Base	Total	Change	Change (%)	Pre Acquisition Interval between Hazardous Material Releases	Post Acquisition Interval between Hazardous Material Releases	Projected Percent Change in Hazardous Accident Frequency
AL	Montgomery		CSXT		605	569	(36)	-5.9%	121	154	-22%
AL	Decatur		CSXT		180	173	(8)	-4.2%	388	488	-20%
AL	Mobile		CSXT		411	436	25	6.1%	175	200	-12%
AL	Flomaton		CSXT		139	150	12	8.4%	500	558	-10%
AL	Dothan		CSXT		130	184	54	41.4%	530	458	16%
AL	N Birmingham		NS	Industrial	272	137	(135)	-49.6%	592	1,147	-48%
AL	Sheffield		NS	Hump	773	779	6	0.8%	216	214	1%
AL	Attalla		NS	Regional	165	168	3	1.8%	959	942	2%
AL	Mobile		NS	Regional	211	219	8	3.8%	756	729	4%
AL	Selma		NS	Regional	127	133	6	4.7%	1,234	1,180	5%
AL	Norris Yd		NS	Hump	1,465	1,595	130	8.9%	117	107	9%
AL	Parrish		NS	Regional	54	70	16	29.6%	2,817	2,193	28%
AL	Huntsville		NS	Regional	11	33	22	200.0%	13,078	4,530	189%
<b>AL Total</b>					<b>4,689</b>	<b>4,778</b>	<b>89</b>				
DC	Washington	Benning	CR	R	89	8	(81)	-91.5%	767	9,941	-92%
<b>DC Total</b>					<b>89</b>	<b>8</b>	<b>(81)</b>				
DE	Edgemoor DE		CR	Regional	145	141	(4)	-2.8%	479	593	-19%
DE	Harrington		CR	Industrial	73	119	46	63.0%	928	699	33%
DE	Wilmington	Wismere	CSXT		187	108	(79)	-42.4%	374	768	-51%
<b>DE Total</b>					<b>405</b>	<b>368</b>	<b>(37)</b>				
FL	Taft		CSXT		132	61	(72)	-54.0%	523	1,336	-61%
FL	Wildwood		CSXT		42	37	(6)	-13.4%	1,568	2,175	-28%
FL	Jacksonville	Jacksonville	CSXT	Flat	500	449	(51)	-10.2%	145	194	-25%
FL	Mulberry		CSXT		369	400	32	8.5%	195	217	-10%
FL	Baldwin	Baldwin	CSXT	Flat	1,060	1,155	95	9.0%	70	78	-10%
FL	Orlando		CSXT		165	182	17	10.0%	423	465	-9%
FL	Miami		CSXT		217	257	40	18.6%	325	332	-2%
FL	Tampa	Yeoman	CSXT	RF	400	499	99	24.8%	180	175	3%
FL	Pensacola	Goulding	CSXT		197	251	54	27.5%	357	341	5%
FL	Lakeland		CSXT		145	194	49	33.7%	478	436	10%
FL	Busch		CSXT		164	231	66	40.4%	424	369	15%
FL	Winston		CSXT		41	80	39	95.1%	1,620	1,025	58%
FL	Simpson Yd		NS	System	159	151	(8)	-5.0%	993	1,044	-5%
FL	Occidental		NS	Industrial	257	283	26	10.1%	625	570	10%
FL	Jacksonville RH		NS	IM Ramp	126	162	36	28.6%	1,243	976	27%
FL	Jacksonville ML		NS	ML Ramp	22	50	28	127.3%	6,699	3,034	121%
<b>FL Total</b>					<b>3,997</b>	<b>4,441</b>	<b>445</b>				
GA	Manchester		CSXT		49	18	(31)	-62.8%	1,366	4,280	-68%
GA	Thomasville		CSXT		173	128	(45)	-26.1%	405	654	-38%
GA	Savannah	Southover	CSXT	Flat	650	588	(62)	-9.5%	113	150	-25%
GA	Cartersville		CSXT		196	205	9	4.8%	359	414	-13%
GA	Atlanta	Tilford	CSXT	Hump/IM?	1,150	1,227	77	6.7%	65	74	-12%
GA	Waycross	Rice	CSXT	Hump	1,950	2,140	190	9.7%	39	43	-9%
GA	Augusta		CSXT		256	311	54	21.2%	276	277	0%
GA	Industry Yd		NS	Regional	196	106	(90)	-45.9%	812	1,469	-45%
GA	Langdale Yd		NS	System	333	185	(148)	-44.4%	487	858	-43%
GA	Forrestville J		NS	Regional	244	145	(99)	-40.6%	657	1,086	-39%
GA	Savannah		NS	System	464	393	(71)	-15.3%	353	415	-15%
GA	Gainesville		NS	Regional	178	155	(23)	-12.9%	891	1,018	-12%
GA	Brosnan Yd		NS	Hump	1,221	1,122	(99)	-8.1%	139	151	-8%
GA	Gordon B143		NS	Regional	64	64	0	0.0%	2,391	2,391	0%
GA	Hapeville ML		NS	ML Ramp	148	148	0	0.0%	1,065	1,065	0%
GA	Kranner		NS	Industrial	164	164	0	0.0%	964	964	0%
GA	Port Wentworth		NS	Industrial	155	155	0	0.0%	1,018	1,018	0%
GA	Tennille		NS	Regional	217	226	9	4.1%	736	708	4%
GA	Albany		NS	Regional	188	198	10	5.3%	845	804	5%
GA	Columbus		NS	Regional	168	182	14	8.3%	942	872	8%
GA	East Point TC		NS	TC Ramp	193	220	27	14.0%	824	726	13%
GA	Nixon		NS	System	164	198	34	20.7%	964	804	20%
GA	Atlanta RH		NS	IM Ramp	487	692	205	42.1%	337	240	40%
GA	Americus		NS	Industrial	48	71	23	47.9%	3,153	2,163	46%
GA	Inman Yd		NS	ML, IM, H	145	335	190	131.0%	1,086	484	124%
GA	Savannah Rh		NS	IM Ramp	22	57	35	159.1%	6,699	2,673	151%

**Attachment B-4  
Cars Switched Per Day at Terminals**

Appendix B Safety

State	City	Yard Name	Road	Type	Oct '96 Base	Total	Change	Change (%)	Pre Acquisition Interval between Hazardous Material Releases	Post Acquisition Interval between Hazardous Material Releases	Projected Percent Change in Hazardous Material Accident Frequency
GA	South Yd		NS	Industrial	17	195	178	1047.1%	8,592	816	953%
<b>GA Total</b>					<b>9,239</b>	<b>9,628</b>	<b>389</b>				
IL	Chicago	Clearing	BRC	Hump	3,200	139	(3,061)	-95.7%	24	602	-96%
IL	Danville	Hillery	CR	R	12	0	(12)	-100.0%	5,301	>40,000	-100%
IL	Englewood TV		CR	IM Ramp	294	114	(180)	-61.2%	242	729	-67%
IL	Ashland Ave		CR	System	545	232	(313)	-57.4%	133	367	-64%
IL	East St. Louis	Rose Lake Y	CR	R	190	81	(109)	-57.4%	369	1,013	-64%
IL	Chgo 47-51 St TV		CR	IM Ramp	385	279	(106)	-27.5%	187	307	-39%
IL	Chicago	Bedford Park	CSXT	IM	475	0	(475)	-100.0%	152	>40,000	-100%
IL	Chicago	Barr Yard	CSXT	Flat	1,100	1,100	0	0.0%	68	82	-17%
IL	Decatur		CSXT		104	122	18	16.9%	660	685	-4%
IL	Danville	Brewer	CSXT	Flat	300	379	79	26.3%	237	229	4%
IL	Chicago	Blue Island	IHB		1,066	1,308	242	22.7%	70	69	1%
IL	Calumet		NS	Industrial	517	112	(405)	-78.3%	318	1,393	-77%
IL	Granite City		NS	System	575	517	(58)	-10.1%	287	318	-10%
IL	Decatur		NS	System	1,032	1,043	11	1.1%	163	162	1%
IL	Landers		NS	System	332	359	27	8.1%	488	453	8%
IL	Burnham ML		NS	ML Ramp	106	119	13	12.3%	1,469	1,314	12%
IL	Chattanooga RH TN		NS	IM Ramp	19	24	5	26.3%	7,718	6,160	25%
IL	Springfield		NS	Regional	48	66	18	37.5%	3,156	2,321	36%
IL	Chicago TC		NS	TC Ramp	74	121	47	63.5%	2,078	1,293	61%
IL	Blue Island		OSA	Regional	33	0	(33)	-100.0%	1,997	>40,000	-100%
<b>IL Total</b>					<b>10,407</b>	<b>6,114</b>	<b>(4,293)</b>				
IN	Chicago	Gibson	CR		240	138	(102)	-42.5%	294	606	-51%
IN	Fort Wayne	Piqua	CR		75	51	(24)	-31.6%	904	1,574	-43%
IN	Burns Harbor		CR	Industrial	314	217	(97)	-30.9%	227	391	-42%
IN	Elkhart IN		CR	Hump	2,326	2,058	(268)	-11.5%	33	45	-26%
IN	Indianapolis	Hawthorne	CR		260	254	(6)	-2.3%	272	336	-19%
IN	Indianapolis	Avon Yard	CR	H	1,574	1,559	(15)	-1.0%	48	58	-18%
IN	Anderson	S Anderson	CR		45	47	2	3.8%	1,480	1,724	-14%
IN	Terre Haute	Terre Haute	CR	R	61	64	3	4.4%	1,104	1,278	-14%
IN	Hawthorne IN		CR	Industrial	0	262	262	N/A	>40,000	326	N/A
IN	Indianapolis	State Street	CSXT	SF	100	0	(100)	-100.0%	685	>40,000	-100%
IN	Lafayette		CSXT		190	147	(44)	-22.9%	368	571	-36%
IN	Evansville	Howell	CSXT	Flat	675	720	45	6.6%	109	123	-12%
IN	Terre Haute	Terre Haute	CSXT	No Yard	100	116	16	15.8%	685	718	-5%
IN	Garrett	Garrett	CSXT	No Yard	200	236	36	18.0%	351	361	-3%
IN	Frankfort		NS	Regional	115	161	46	40.0%	1,358	982	38%
IN	Fi Wayne TC		NS	TC Ramp	308	436	128	41.6%	525	375	40%
IN	Muncie		NS	Regional	109	184	75	68.8%	1,430	863	66%
IN	Roanoke		NS	Industrial	18	35	17	94.4%	8,131	4,280	90%
IN	Lafayette		NS/CR	Regional	177	132	(45)	-25.4%	395	524	-25%
IN	Crawfordsvle		OSA	Industrial	41	41	0	0.0%	1,620	1,620	0%
IN	Indiana Hbr		OSA	Industrial	213	213	0	0.0%	330	330	0%
IN	Gibson IN		OSA	System	41	102	61	148.8%	1,620	672	141%
<b>IN Total</b>					<b>7,182</b>	<b>7,172</b>	<b>(11)</b>				
KY	Lexington	Lexington	CSXT	SF	50	33	(17)	-33.8%	1,337	2,403	-44%
KY	Louisville	Osborn Yard	CSXT	H	1,200	828	(372)	-31.0%	62	108	-42%
KY	Corbin	Corbin	CSXT	RF	200	151	(49)	-24.5%	351	556	-37%
KY	Shelby		CSXT		31	24	(7)	-21.4%	2,134	3,251	-34%
KY	Russell	Russell	CSXT	Flat	713	732	19	2.7%	103	121	-15%
KY	Louisville		NS	System	399	318	(81)	-20.3%	409	509	-20%
KY	Buechel RH		NS	IM Ramp	61	83	22	36.1%	2,504	1,860	35%
KY	Danville		NS	ML, IM, H	151	216	65	43.0%	1,044	739	41%
KY	Georgetown RH		NS	IM Ramp	21	40	19	90.5%	7,007	3,763	86%
<b>KY Total</b>					<b>2,825</b>	<b>2,425</b>	<b>(401)</b>				
LA	New Orleans	New Orleans	CSXT	RF	840	492	(348)	-41.4%	88	178	-51%
LA	Oliver Yd		NS	Regional	165	132	(33)	-20.0%	959	1,189	-19%
LA	New Orleans RH		NS	IM Ramp	126	172	46	36.5%	1,243	921	35%
<b>LA Total</b>					<b>1,131</b>	<b>796</b>	<b>(335)</b>				
MA	Boston	Beacon Park	CR	R	239	82	(157)	-65.9%	296	1,006	-71%
MA	Springfield	Springfield	CR	R	309	166	(144)	-46.4%	231	508	-55%
MA	Worcester	Worcester	CR		185	110	(75)	-40.4%	378	753	-50%

**Attachment B-4  
Cars Switched Per Day at Terminals**

Appendix B Safety

State	City	Yard Name	Road	Type	Oct '96 Base	Total	Change	Change (%)	Pre Acquisition Interval between Hazardous Material Releases	Post Acquisition Interval between Hazardous Material Releases	Projected Percent Change in Hazardous Material Accident Frequency
<b>MA Total</b>					733	357	(376)				
MD	Conton Piers		CR	Industrial	626	308	(318)	-50.8%	117	279	-58%
MD	Bay View		CR	System	181	262	81	44.8%	386	326	18%
MD	Baltimore TV		CR	IM Ramp	71	133	62	87.3%	953	628	52%
MD	Baltimore TC		CR	TC Ramp	0	29	29	N/A	>40,000	2,730	N/A
MD	Baltimore	Greys	CSXT		60	0	(60)	-100.0%	1,122	>40,000	-100%
MD	Baltimore	Curtis Bay	CSXT	RF	375	86	(289)	-77.1%	191	957	-80%
MD	Baltimore	Penn Mary	CSXT	RF	200	97	(103)	-51.4%	351	850	-59%
MD	Hagerstown	Hagerstown	CSXT	No Yard	100	98	(2)	-2.4%	685	846	-19%
MD	Baltimore	Bay View	CSXT	RF	350	342	(8)	-2.4%	205	253	-19%
MD	Baltimore	Locust Point	CSXT	RF	300	356	56	18.8%	237	243	-2%
MD	Brunswick	Brunswick	CSXT	SF	233	278	45	19.3%	303	308	-2%
MD	Cumberland	Cumberland	CSXT	Hump	770	968	198	25.8%	96	92	3%
MD	Hagerstown		NS/CR	Regional	330	422	92	27.9%	216	171	27%
MD	Sparrows Pnt		OSA	Industrial	81	84	3	3.7%	840	811	4%
<b>MD Total</b>					3,677	3,463	(214)				
MI	Monroe		CR	Industrial	194	271	77	39.7%	361	316	14%
MI	Livernois		CRD	Regional	58	34	(24)	-41.4%	1,159	2,342	-51%
MI	River Rouge		CRD	System	169	132	(37)	-21.9%	413	632	-35%
MI	Sterling		CRD	Industrial	62	56	(6)	-9.7%	1,087	1,447	-25%
MI	North Yard		CRD	Regional	119	115	(4)	-3.4%	579	722	-20%
MI	Sterling ML		CRD	ML Ramp	7	7	0	0.0%	8,917	10,762	-17%
MI	Trenton		CRD	Industrial	79	112	33	41.8%	860	741	16%
MI	North Yard ML		CRD	ML Ramp	21	43	22	104.8%	3,089	1,867	65%
MI	Detroit TV		CRD	IM Ramp	11	55	44	400.0%	5,765	1,472	292%
MI	Detroit	Middlebelt	CSXT		50	0	(50)	-100.0%	1,337	>40,000	-100%
MI	Grand Rapids	Grand Rapid	CSXT	Reg	325	243	(82)	-25.3%	220	351	-37%
MI	Flint		CSXT		239	247	8	3.5%	296	345	-14%
MI	Lansing	Lansing	CSXT	2nd	58	63	5	8.4%	1,159	1,293	-10%
MI	Detroit	Plymouth	CSXT	2nd	150	168	18	12.3%	463	500	-7%
MI	Detroit	Wayne	CSXT		205	244	39	18.9%	343	350	-2%
MI	Detroit	River Rouge	Joint	R	365	201	(164)	-45.0%	196	422	-53%
MI	Detroit	Livernois	Joint	R	206	123	(83)	-40.4%	341	679	-50%
MI	Detroit	North Yard	Joint	R	435	343	(92)	-21.1%	166	251	-34%
MI	Detroit	Lincoln Park	Joint	R	50	46	(4)	-7.6%	1,337	1,742	-23%
MI	Detroit	Mound Road	Joint	R	132	132	0	0.2%	524	632	-17%
MI	Detroit	Warren/Sterl	Joint	R	145	167	22	14.8%	479	506	-5%
MI	Melvindale ML		NS	ML Ramp	153	153	0	0.0%	1,031	1,031	0%
MI	Oakwood		NS	System	548	548	0	0.0%	301	301	0%
MI	Detroit TC		NS	TC Ramp	215	232	17	7.9%	742	690	8%
<b>MI Total</b>					3,996	3,735	(261)				
MO	N Kansas City		NS	System	354	238	(116)	-32.8%	459	673	-32%
MO	Kansas City TC		NS	TC Ramp	132	140	8	6.1%	1,189	1,123	6%
MO	St Louis TC		NS	TC Ramp	122	150	28	23.0%	1,283	1,051	22%
MO	St Louis RH	Luther	NS	IM Ramp	54	206	151	279.6%	2,817	777	262%
MO	Voltz RH		NS	IM Ramp	8	115	107	1337.5%	17,783	1,358	1209%
<b>MO Total</b>					670	848	178				
NC	Bostic		CSXT		115	77	(38)	-33.3%	598	1,067	-44%
NC	Fayetteville		CSXT		180	165	(15)	-8.4%	388	509	-24%
NC	Wilmington		CSXT		297	303	6	2.0%	240	284	-16%
NC	Hamlet	Hamlet	CSXT	Hump	1,600	1,711	111	6.9%	47	53	-12%
NC	Charlotte	Charlotte	CSXT	Flat	250	276	26	10.4%	283	311	-9%
NC	Rocky Mount	Rocky Mount	CSXT	Flat	1,000	1,119	119	11.9%	74	80	-8%
NC	Weldon		CSXT		112	133	21	18.9%	615	628	-2%
NC	Charlotte		NS	System	267	225	(42)	-15.7%	602	711	-15%
NC	Linwood		NS	Hump	965	881	(84)	-8.7%	174	190	-8%
NC	Winston Salem		NS	Regional	138	145	7	5.1%	1,139	1,086	5%
NC	Raleigh Yd		NS	Regional	208	234	26	12.5%	767	684	12%
NC	Asheville		NS	Regional	164	216	52	31.7%	964	739	30%
NC	Pomona Yd		NS	System	174	247	73	42.0%	911	649	40%
NC	Charlotte TC		NS	TC Ramp	0	23	23	N/A	>40,000	6,418	N/A
<b>NC Total</b>					5,469	5,754	285				
NJ	Croxton TV		CR	IM Ramp	51	340	289	566.7%	1,312	254	417%