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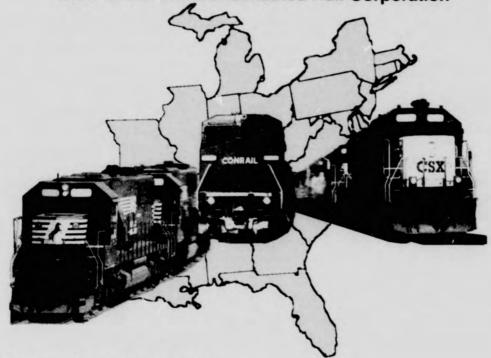
# DRAFT ENVIRONMENTAL IMPACT STATEMENT

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



**Executive Summary** 

prepared by:

### Surface Transportation Board Section of Environmental Analysis

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#### SURFACE TRANSPORTATION BOARD Washington, DC 20423

Section of Environmental Analysis

December 12, 1997

Dear Interested Parties:

The Section of Environmental Analysis (SEA) is pleased to provide you with the enclosed Draft Environmental Impact Statement (EIS) on the proposed acquisition of Conrail by Norfolk Southern Railroad and CSX Railroad. We emphasize that this document is a draft and contains only SEA's preliminary analyses and recommendations for mitigatir.g the possible environmental effects of the proposed Conrail Acquisition.

This Draft EIS is approximately 3,000 pages in length, encompasses nine volumes, and reflects comments received from the public as well as from Federal, state, and local agencies. We encourage you to submit written comments, which SEA will fully consider in preparing the Final EIS. Please keep in mind that the Board has made no formal decision at this time concerning the proposed Conrail Acquisition. Only after consideration of the entire environmental record, which comprises all public comments and filings, the Draft EIS, and the Final EIS, will the Board make a final decision in this case. The Board expects to issue this decision on July 23, 1998.

If you would like additional information about the environmental review process, please call SEA's toll-free Environmental Hotline at 1-888-869-1997, or visit our website at http://www.conrailmerger.com. If you wish to submit comments, they must be received by February 2, 1998, the end of the 45-day public comment period. When submitting comments, please send one original and ten copies to:

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

In the lower left-hand corner, indicate:

Attention: Elaine K. Kaiser **Environmental Project Director** Environmental Filing

Thank you for your interest. We welcome your comments.

Sincerely yours,

James

Elaine K. Kaiser **Environmental Project Director** Section of Environmenta' Analysis

Enclosure

#### 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 TransportationBoard'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

- Chapters 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.

### GLOSSARY

at-grade roadway crossing	The location where a local street or highway crosses railroad tracks at the same level or elevation.		
attainment area	An area that meets National Ambient Air Quality Standards (NAAQS) specified under the Clean Air Act.		
A-weighted Sound Level (dBA)	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.		
ballast	Top surface of rail bed, usually composed of aggregate (i.e., small rocks and gravel).		
Best Management Practices (BMPs) Techniques recognized as very effective in pro environmental protection.			
Board	Surface Transportation Board, the licensing agency for the proposed Conrail Acquisition.		
borrow material	Earthen material used to fill depressions to create a level right-of-way.		
branch line	A secondary line of railroad usually handling light volumes of traffic.		
bulk train	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.		
consist	The make-up of a train, usually referring to the number of cars.		
construction footprint	The area at a construction site subject to both permanent and temporary disturbances by equipment and personnel		
Class I Railroad Railroads that exceed annual gross revenues of million, in 1991 dollars. The amount is in annually to reflect inflation. For 1996, the annual revenue was \$255 million.			

Criteria of Effect

criteria pollutant

cultural resource

Day-Night Sound (Ldn)

dBA

decibel (dB)

deciduous

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.

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.

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.

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.

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.

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.

Any plant whose leaves are shed or fall off during certain seasons; usually used in reference to tree types.

dray	A local move of a trailer, truck, or container.				
emergent species	An aquatic plant with vegetative growth mostly above the water.				
endangered species	<ul> <li>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.</li> <li>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.</li> <li>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.</li> </ul>				
failure mode and effects analysis (FMEA)					
ករា					
flat yard	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.				
Flood Insurance Rate Maps	Maps available from the Federal Emergency Management Agency that delineate the land surface area of 100-year and 500-year flooding events.				
floodplain	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.				
frog	A track structure used where two running rails intersect that permits wheels and wheel flanges on either rail to cross the other rail.				
habitat	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).				

The limited right of one railroad to operate trains over haulage right the designated lines of another railroad. Any material that poses a threat to human health and/or hazardous materials the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive. The location where a local street or highway crosses highway/rail at-grade crossing railroad tracks at the same level or elevation. Any prehistoric or historic district, site, building, historic property 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. A railroad classification yard in which the classification hump vard of cars is accomplished by pushing them over a summit. known as a "hump," beyond which they run by gravity. An arrangement of switch, lock, and signal appliances inter locking interconnected so that their movements succeed each other in a predetermined order, enabling a moving train to switch ento adjacent rails. It may be operated manually or automatically. A site or hub consisting of tracks, lifting equipment, intermodal facility 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. intermodal train 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).

key routes	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.
key train	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.
L <sub>dn</sub>	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.
Level of Service (LOS)	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.
lift	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.
locomotive, road	One or more locomotives (or engines) designed to move trains between yards or other designated points.
locomotive, switching	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.

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

rail spur	A track that diverges from a main line, also known as a spur track or rail siding, which typically serves one or more industries.			
rail yard	A location where rail cars are switched and stored.			
railbanking	A set-aside of abandor.ed rail corridor for recreational and/or transportation uses, including reuse for rail.			
receptor/receiver	A land use or facility where sensitivity to noise or vibration is considered.			
right-of-way	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.			
riparian	Relating to, living, or located on, or having access to, the bank of a natural water course, sometimes also a lake or tidewater.			
riprap	A loose pile or layer of broken stones erected in water or on soft ground as a guard against erosion.			
riverine wetland	All wetlands and deepwater habitats contained within a channel, either natu ally or artificially created.			
route miles	Distance calculated along a railroad's main and branch lines.			
ruderal	An introduced plant community dominated by weed species, typically adapted to disturbed areas.			
scrub-shrub	Areas dominated by woody vegetation less than 6 meters (20 feet) tall, which includes shrubs and young trees.			
set out	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.			
Section 106	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.			

A physical disturbance in a medium (e.g., air) that is sound capable of being detected by the human ear. A quantitative measure of the noise exposure produced Sound Exposure Level (SEL) 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. Refers to a removal of property, an acquisition of righttake or taking of-way, or a loss and/or degradation of species' habitat. A species that is likely to become an endangered species threatened within the foreseeable future throughout all or part of its range, and is protected by state and/or federal law. The right or combination of rights of one railroad to trackage rights 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. A track arrangement consisting of a switch and frog with turnout 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. A train consisting of cars carrying a single commodity, unit train e.g., a coal train (see also bulk train). An all inclusive term that refers to many types of water resources 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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### LIST OF ACRONYMS AND ABBREVIATIONS

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

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

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

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

## **Executive Summary**

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#### EXECUTIVE SUMMARY

#### **ES.1 Introduction**

On June 23, 1997, three major railroads (CSX, Norfolk Southern (NS), and Conrail)<sup>1</sup> applied to the Surface Transportation Board (Board) for authority for CSX and NS to acquire Conrail (Conrail Acquisition). Under the Application,<sup>2</sup> most of the Conrail assets would be divided between CSX and NS. However, some portions of Conrail (referred to as the Shared Assets) would be operated jointly by CSX, NS, and Conrail. Under the National Environmental Protection Act (NEPA), the Board must consider the potential environmental impacts of the proposed Conrail Acquisition in making its decision in this case.

The three Applicants' rail systems encompass more than 44,000 miles of track in 24 states, the District of Columbia, and the Canadian Provinces of Ontario and Quebec. Their rail systems pass through more than 1,000 counties, with a total population of more than 90 million people.

Combined, the Applicants handle more than 10 million rail cars a year. In addition to freight operations, Amtrak and 14 commuter agencies operate over tracks owned by one or more of the Applicants. Under the proposal, the existing CSX and NS systems would be expanded and would substitute two competing railroads for the existing Conrail system in the Northeast and upper Midwest.

The Board's Section of Environmental Analysis (SEA) has prepared this Draft Environmental Impact Statement (EIS) to assess potential effects on the natural and human environment that could reasonably result from the proposed Conrail Acquisition if it is approved by the Board. This analysis considers potential environmental effects at several levels:

CSX refers to CSX Corporation and CSX Transportation; Norfolk Southern refers to Norfolk Southern Corporation and Norfolk Southern Railway Company; Conrail refers to Conrail, Inc. and Consolidated Rail Corporation.

<sup>&</sup>quot;Application" refers to Surface Transportation Board Finance Docket No. 33388.

This analysis considers potential environmental effects at several levels:

- Broad system-wide environmental effects on the eastern United States.
- Regional environmental effects on several states.
- · Local or site-specific effects on individual communities.

With this Draft EIS, SEA seeks to inform Federal, state, and local agencies and the general public about the potential environmental effects of the proposed Conrail Acquisition. SEA also describes in this Draft EIS its preliminary conclusions regarding these effects and those actions that SEA currently intends to recommend that the Board require of the Applicants to mitigate or alleviate potential significant environmental impacts.

Under the Council of Environmental Quality (CEQ) regulations implementing NEPA, the public has a 45-day period in which to review and comment on this Draft EIS. SEA invites all interested parties to provide comments that could further assist SEA's environmental review. SEA also seeks comments on the reasonableness and feasibility of proposed mitigation measures and suggestions regarding additional or alternate mitigation measures to address potential significant environmental impacts. (See Section ES.7 for information on how to file comments on the Draft EIS.)

#### ES.1.1 Overview of Potential Impacts and Preliminary Recommended Mitigation

Based on SEA's extensive analysis of the potential environmental effects of the proposed Conrail Acquisition, SEA presents the following preliminary conclusions in this Draft EIS:

- On a system-wide basis, SEA identified no significant environmental impacts, primarily due to the more efficient routes that would be created. Moreover, there would be some positive impacts on a system-wide basis such as reductions in fuel consumption, system-wide air pollutant emissions, and highway congestion.
- On a regional basis, SEA identified potentially significant environmental impacts for passenger rail safety and hazardous materials transport that appear to warrant mitigation.
- On a local or site-specific basis, SEA identified potentially significant environmental impacts that included such areas as freight rail operations, highway/rail at-grade crossing safety, traffic delay at highway/rail at-grade crossings, noise, cultural and historic resources, natural resources, and environmental justice issues. The following states could be affected by one or more of these potential environmental impacts: Alabama, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Missouri, New Jersey, New

York, North Carolina, Ohio, Pennsylvania, South Carolina, Virginia, West Virginia, and the District of Columbia.

- SEA identified possible environmental mitigation measures that the Board could require of the Applicants to address potentially significant environmental impacts if the Board approves the proposed Acquisition. (See Chapter 7 for a detailed list of SEA's preliminary recommended mitigation.)
- SEA encourages the Applicants and affected communities to work together to identify and reach agreement on alternate mitigation measures or approaches that could be more effective or more acceptable, but may be beyond the Board's authority to impose.

#### ES.1.2 Alternate Actions

SEA evaluates three alternative actions available to the Board in this Draft EIS:

**No-Action Alternative** – If the Board denies the Application, the proposed changes in ownership and rail operations would not be implemented and Conrail would continue to exist as the major rail carrier in the Northeast and upper Midwest. SEA has considered this alternative as the baseline scenario, to which SEA compared environmental changes to determine the potential environmental effects that could result from the proposed Conrail Acquisition.

**Approval of the Proposed Acquisition** – In evaluating this alternative, SEA considered the proposed changes in ownership and operations described in the Application, Operating Plans, and Environmental Report, submitted to the Board on June 23, 1997, as revised in the Errata and Supplemental Environmental Report filed with the Board on August 28, 1997. The Applicants have since provided, and continue to provide, additional operational and environmental information.

Approval of the Proposed Acquisition with Conditions – In considering this alternative, SEA evaluated the Applicants' proposal along with conditions that the Board could impose as part of any decision approving the proposed Conrail Acquisition. These conditions could include suggested modifications to the Applicants' Operating Plans that other parties have requested in Inconsistent and Responsive Applications to the Board, such as requests for trackage rights (the right of a railroad to operate trains over tracks owned by another railroad) and for modifications of the Shared Assets Areas. Conditions of approval could also include conditions requiring the Applicants to implement environmental mitigation measures to reduce or eliminate potential significant environmental impacts.

In considering whether to approve the transaction, 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, which include both beneficial and adverse impacts.

In its analysis, SEA has evaluated potential environmental impacts in the following issue areas:

- · Safety.
- Transportation Systems.
- Energy.
- Air Quality.
- Noise.
- Cultural and Historical Resources.
- Hazardous Waste Sites.
- Natural Resources.
- · Land Use and Socioeconomics related to changes in the physical environment.
- Environmental Justice.
- Cumulative Effects.

#### ES.2 Proposed Action

#### **ES.2.1 Primary Application**

The proposed Conrail Acquisition involves over 44,000 miles of track and numerous railroadowned facilities throughout the eastern United States. The proposed Conrail Acquisition, with its division of Conrail's assets by CSX and NS, would result in two major railroad systems of roughly equal size and scope operating in the eastern United States. CSX currently operates approximately 18,500 route miles of rail lines in 19 states, the District of Columbia, and the Province of Ontario, Canada. The expanded CSX system resulting from this proposal would consist of approximately 23,200 route miles. NS currently operates approximately 14,300 route miles of rail line in 19 states and the Province of Ontario. The expanded NS system resulting from this proposal would be comprised of approximately 21,100 route miles. Conrail currently operates approximately 10,500 route miles of rail line in 13 states, the District of Columbia, and the Province of Quebec, Canada. Only 514 miles of track would remain in the Conrail system, if the proposed Conrail Acquisition is approved and implemented, and would be operated as Shared Assets Areas. The Shared Assets Areas are located in Northern New Jersey, Southern New Jersey/Philadelphia, and Detroit, Michigan. Figures ES-1 and ES-2 show the existing and proposed CSX, NS, and Conrail rail systems.

In 1996 and early 1997, CSX and NS each separately considered acquiring Conrail. On April 7, 1997, CSX and NS officially notified the Board of their intent to jointly acquire certain Conrail assets. Their joint Application, filed on June 23, 1997, included Operating Plans and an Environmental Report describing the physical and operational changes that would be associated with the proposed Acquisition and the potential environmental effects of those changes. The Applicants submitted corrected and supplemental information in the Errata and Supplemental Environmental Report filed with the Board on August 28, 1997. The Applicants have since provided, and continue to provide, additional operational and environmental information.

The proposed Conrail Acquisition would result in some rerouting of rail traffic, increasing traffic for some rail line segments and rail yards, while decreasing traffic for others. The Applicants also anticipate attracting additional traffic away from highway truck shipments and onto the expanded CSX and NS rail systems. This would result in a decrease in long-haul truck traffic, although there could be increased local truck traffic patterns, the Applicants plan various related rerouting and consolidation activities, including the abandonment of some rail lines, the construction of new rail line connections, and the construction or expansion of certain rail yards and intermodal facilities. Chapter 2 includes a more detailed description of the anticipated physical and operational changes expected to result from the proposed Conrail Acquisition.

#### ES.2.2 Related Actions and Seven Separate Connections

SEA has investigated 75 other actions proposed by the Applicants that could be reasonably related to the proposed Acquisition. Based on this review, SEA determined that three projects (two rail yard expansions and a bridge renovation) could potentially result in environmental impacts beyond the existing railroad right-of-way. These construction projects are discussed in appropriate issue and site-specific sections of Chapter 5. SEA determined that the remaining projects – minor actions with the potential for only small and temporary impacts – do not require further analysis.

At the request of CSX and NS, the Board has already considered proposals to construct seven new rail line connections, together totaling approximately four miles of new track. Specifically, CSX and NS asked the Board to consider these seven connections separately from, and prior to, the Board's decision on the proposed Conrail Acquisition. CSX and NS did this so they would be able to immediately provide efficient services in competition with one another if the Board

approves the proposed Acquisition. CSX and NS assumed the risk that the Application may be denied and/or they would not be authorized to operate over one or more of the new connections.

On October 7, 1997, SEA issued separate Environmental Assessments addressing the potential construction impacts of each of these seven projects. In a decision issued November 25, 1997, the Board gave final approval, subject to certain environmental mitigation conditions, for the physical construction of these seven projects. However, no rail line operations can begin over the Seven Separate Connections until SEA completes its EIS process for the proposed Conrail Acquisition and then only if the Board approves the proposed Conrail Acquisition. The environmental impacts of the railroad operations over the Seven Separate Connections are assessed in this Draft EIS. For a detailed discussion of the Board's separate consideration of the physical construction of the Seven Separate Connections, and the specific environmental review process, see Board Decision No. 9 and Decision (in Sub Nos. 1-7) dated November 25, 1997, included in Appendix T.

#### ES.2.3 Purpose and Need for the Proposed Conrail Acquisition

According to CSX and NS, the purpose of the proposed Conrail Acquisition is to provide a more efficient rail transportation system in the eastern United States and to increase rail competition in the Northeast. CSX and NS state that there currently is a lack of competition in much of the commercial area now served by Conrail. They maintain that a well-managed rail network, configured in response to market forces, would increase competitive options for shippers, and yield substantial efficiencies and corresponding benefits to the shipping public.

Further, the Applicants claim that there is a benefit to the public when railroads spread their fixed costs over a broader traffic base, because the per-unit costs of shipping freight decline. Another public benefit cited by the Applicants is that the proposed Acquisition would result in a substantial reduction of costly and time-consuming rail traffic interchange that now slows operations as freight moves between the existing Conrail, CSX, and NS systems. The Applicants further state that the proposed Conrail Acquisition would also have environmental benefits, such as system-wide reductions in fuel consumption and air pollutant emissions.

#### ES.3 Role of the Board and SEA

The Board is an independent Federal regulatory agency with jurisdiction over certain surface transportation matters. In its review of proposed railroad mergers and acquisitions, the Board takes into account economic, competitive, and environmental considerations. The Board can either (1) approve a transaction as proposed, without conditions; (2) approve the transaction with conditions to offset or reduce the potential impacts including environmental impacts of the proposed transaction; or (3) disapprove the transaction (the no-action alternative).

The Board's authority to impose conditions is not limitless. Any conditions imposed, including environmental mitigation, must be directly related to the transaction before the Board for approval, must be reasonable, and must be supported by the record before the Board. The Board does not have authority to require mitigation of pre-existing environmental impacts, such as impacts resulting from existing railroad operations or land development in the vicinity of the railroads.

SEA is responsible for conducting the NEPA environmental review. SEA engages independent, third-party contractors to assist with its environmental analysis and with the preparation of its environmental documents.

#### ES.3.1 Review of the Merits of the Proposed Transaction

The Board is required by statute to approve and authorize a proposed rail acquisition when it finds that the transaction is consistent with the public interest, based on the economic and competitive merits. The Board has established a process for receiving comments and alternative proposals related to the economic and competitive merits of the proposed Contail Acquisition. This process is separate from the environmental review process, which provides specific opportunities for the public to comment on the proposed Acquisition's potential environmental effects. However, the Board will consider both the economic and competitive issues, and the potential environmental effects in making its decision on the proposed Contail Acquisition.

#### ES.3.2 Schedule

Following the 45-day public review and comment period. SEA will consider all the public comments submitted in response to this Draft EIS. SEA will then prepare the Final EIS, which will contain SEA's final recommendations to the Board regarding environmental conditions. SEA plans to publish the Final EIS prior to the Board's voting conference, which is scheduled for June 8, 1998. At the voting conference, the Board will announce whether it will grant or deny the Application, or grant it with appropriate conditions, including environmental mitigation conditions. The Board expects to issue a written decision by July 23, 1998. The Board's procedural schedule for the proposed Conrail Acquisition and the time frame for SEA's environmental review schedule are detailed in Table ES-1.

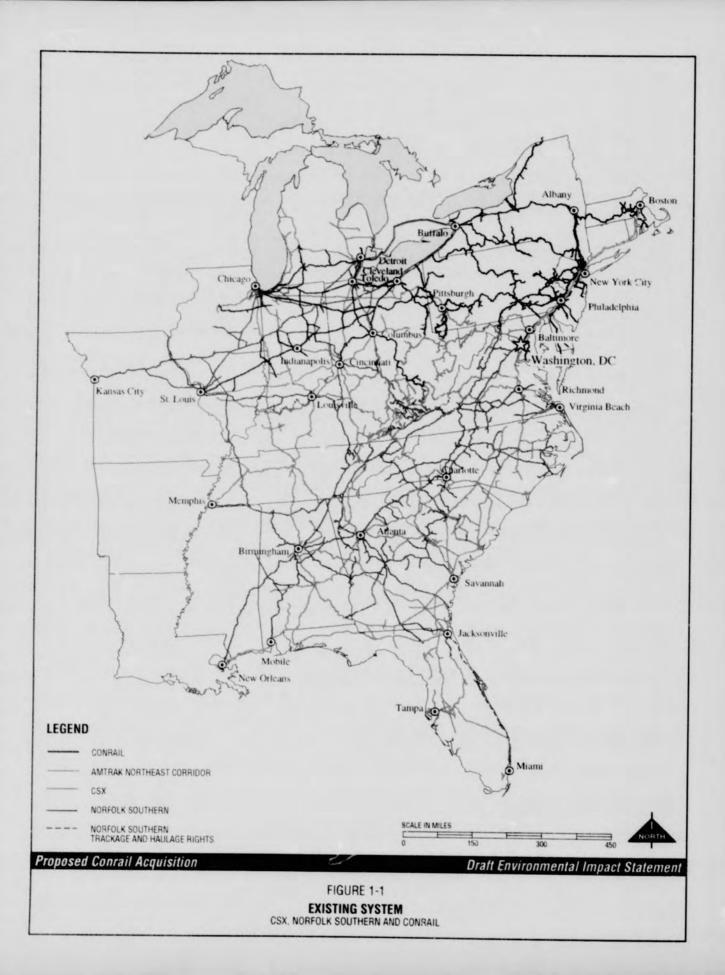
DAY	ACTION	DATE
	Applicants filed Preliminary Environmental Report with SEA	May 16, 1997
Day 1	Applicants filed Application and Environmental Report	June 23, 1997
	Board issued Notice of Ins	July 7, 1997

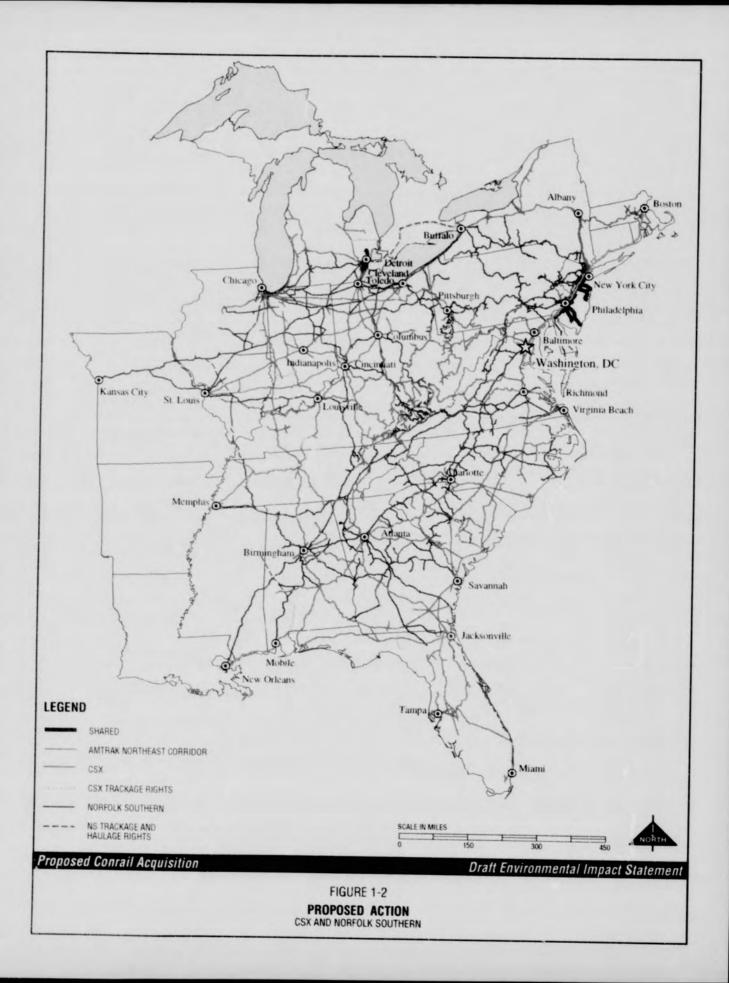
Table ES-1 Board's Procedural Schedule



DAY	ACTION	DATE
	Public and government agencies filed comments on the Draft Scope of the Environmental Impact Statement	August 6, 1997
Day 60	Other applicants filed descriptions of Incor Stent and Responsive Applications	August 22, 1997
	Applicants filed Preliminary Draft Environmental Assessments for the Seven Separate Connections referenced in Decision No. 9	September 5, 1997
	SEA issued Final Scope of the Environmental Impact Statement	October 1, 1997
Day 100	Other applicants filed Responsive Environmental Reports and Verified Environmental Statements for any Inconsistent and Responsive Applications	October 1, 1997
	SEA issued Environmental Assessments for the Seven Separate Connections	October 7, 1997
Day 120	Other applicants filed Inconsistent and Responsive Applications	October 21, 1997
	SEA received comments on the Environmental Assessments for the Seven Separate Connections	October 27, 1997
	Board issued Decision requiring Applicants to file Safety Integration Plans	November 3, 1997
Day 150	Board issued Notice of Acceptance of the Inconsistent and Responsive Applications	November 20, 1997
	Board issued Decision allowing Seven Separate Connections to proceed	November 25, 1997
	Applicants filed Safety Integration Plans	December 3, 1997
	SEA to issue Draft Environmental Impact Statement to the public	December 12, 1997
Day 175	Responses to the Inconsistent and Responsive Applications and rebuttals in support of Primary Application filed with the Board	December 15, 1997
	EPA publishes Federal Register notice initiating 45-day comment period on the Draft Environmental Impact Statement	December 19, 1997
Day 205	Board to consider rebuttals supporting Inconsistent and Responsive Applications	January 21, 1998
	Public comments on Draft Environmental Impact Statement due to SEA	February 2, 1998
Day 245	All parties to submit briefs	March 2, 1998
	SEA to issue Final Environmental Impact Statement to the public and the Board	Late-May 1998
Day 346	Board to conduct oral argument	June 4, 1998
Day 350	Board to conduct Voting Conference	June 8, 1998
Day 395	Board to issue final written decision	July 23, 1998
	Administrative Appeals Filing Deadline	August 13, 1998

## Table ES-1 Board's Procedural Schedule





#### ES.4 Environmental Review Process

The Board's decision to grant or deny the proposed Conrail Acquisition is a Federal action requiring review under NEPA. Because of the magnitude of the proposed Acquisition and the potential for significant environmental impact, the Board has elected to prepare an EIS. In conducting this environmental review, the Board considers the requirements of NEPA, other related environmental laws and their implementing regulations, and the Board's own environmental rules. NEPA requires completion of this environmental review process before the Board can issue a final decision on this project.

In preparing this Draft EIS, SEA has considered any proposed changes in railroad activities that would meet or exceed the thresholds for environmental analysis set forth in the Board's regulations at 49 CFR 1105.7. For issue areas for which the E ard's regulations do not specifically provide a threshold, SEA developed thresholds that it considers appropriate to t' Acquisition-related activity. Generally, where, as a result of the proposed Acquisition, an affected area would experience an increase in rail traffic of at least 100 percent measured in annual gross ton miles, or an increase of at least eight trains per day (regardless of tonnage), SEA evaluated the potential environmental impacts associated with the increase in rail traffic.

The various thresholds used by SEA are listed at the conclusion of this Executive Summary in Table ES-A. The activities that warrant environmental analysis, based on these thresholds, are described below.

#### ES.4.1 Railroad Activities Evaluated

This Draft EIS contains SEA's analysis of the potential system-wide, regional, and local environmental impacts of five types of activities associated with the proposed Conrail Acquisition. These are described below.

**Rail Line Segments**. Rail line segments are the portions of rail lines that run between two terminals or junction points. CSX and NS each proposes to modify its operations over the expanded rail networks and to route traffic to meet customers' freight shipping needs. These modifications would result in rail traffic increases on some rail line segments and decreases on others. The anticipated changes in level of rail traffic on 119 rail line segments in the States of Alabama, Connecticut, Delaware, Georgia, Illinois, Indiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Washington, D.C., would meet or exceed the Board's thresholds for environmental analysis. To evaluate the potential impacts on passenger rail safety resulting from the proposed Acquisition, SEA also analyzed all passenger rail lines that accommodate freight traffic that would experience a traffic increase of one or more freight trains per day. In addition, SEA evaluated potential safety impacts for all rail line segments with any increase in the transport of hazardous materials. Attachment ES-B of this Executive Summary shows a complete listing of all rail line segments,

including those rail line segments that met the Board's thresholds for environmental analysis or additional thresholds SEA developed for this Draft EIS.

**Constructions**. SEA reviewed the proposed construction of 15 new rail line connections<sup>3</sup> (four by CSX and 11 by NS) in the States of Illinois (5). Indiana (2), Maryland, Michigan, New Jersey, New York (2), and Ohio (3) and 3 other facilities (one fueling facility at a rail yard in Ohio, one intermodal facility in Ohio, and a bridge rehabilitation in Delaware). New connections between existing rail lines would provide shorter, more direct routing between various origin and destination points over the expanded CSX and N5 systems. One of the proposed CSX connections and five of the proposed NS connections would require the acquisition of additional right-of-way. SEA evaluated the potential environmental impacts of the construction of the 15 proposed new connections (not including the Seven Separate Connections) and considered sitespecific alternatives to these proposed connections. SEA evaluated the potential environmental impacts of rail operations on all 22 proposed new rail line connections in this Draft EIS.

Intermodal Facilities. Intermodal facilities are areas where truck trailers and/or containers are transferred between trains and trucks or ships. Intermodal operations combine the local delivery capability of trucks with the long-haul efficiency of rail transport and ocean carriers. Local truck traffic would increase near the intermodal facility, while long-haul truck traffic would decrease on interstate and regional roadways. Proposed changes in activity at 23 intermodal facilities in the States of Georgia (2), Illinois (3), Kentucky, Louisiana, Maryland, Michigan, Missouri (2), New Jersey (4), Ohio (2), Pennsylvania (5), and Tennessee meet or exceed the Board's thresholds for environmental analysis. SEA assessed the environmental effects of increased operations at these intermodal facilities.

**Rail Yards**. The primary activity at rail yards is the switching and sorting of rail cars as trains are assembled and disassembled. Other activities include locomotive maintenance and fueling, and freight car inspection, cleaning, and repair. Rail yards vary in size from small support yards with just a few tracks to very large classification yards with dozens of tracks. SEA analyzed the proposed changes at rail yards that would result from the proposed Acquisition and determined that 15 rail yards in the States of Alabama. Georgia. Illinois, Indiana (2). Michigan, Missouri, New York, Ohio (4), Pennsylvania (2), and Tennessee would have activity increases that meet or exceed the Board's thresholds for environmental analysis. This Draft EIS evaluates the potential environmental impacts of increased activities at these rail yards.

Abandonments. CSX and NS proposed to abandon one bridge in Ohio and three rail line segments (with a combined total of 58.2 route miles) in Illinois, Indiana, and Ohio because operating and maintaining this bridge and these rail line segments would no longer be efficient.

<sup>&</sup>lt;sup>3</sup> This does not include the Seven Separate Connections in the States of Illinois, Indiana, and Ohio.

SEA evaluated the potential environmental impacts associated with the abandonment of these assets.

## ES.4.2 Conducting the Environmental Analysis

SEA's analysis of the potential environmental effects of the proposed Conraii Acquisition included seven primary components: data review and verification: analysis of potential environmental effects; review of the No-Action Alternative: determination of significance; consideration of Inconsistent and Responsive Applications; evaluation of areas of special concern; and development of mitigation. Each of these components is described below.

**Data Review and Verification**. In preparing this document, SEA reviewed and verified information provided by the Applicants to identify changes from pre-Acquisition operations. SEA consulted with appropriate government agencies, including the Federal Railroad Administration (FRA) and the Environmental Protection Agency (EPA). In addition, SEA reviewed and verified the information provided by the Applicants and conducted independent environmental analyses, including over 170 site visits and field investigations. SEA also considered all the public comments received as of November 1, 1997.<sup>4</sup>

Analysis of Potential Environmental Effects. SEA analyzed those proposed railroad activities that would meet or exceed the Board's thresholds for environmental analysis to determine the potential environmental effects. SEA considered those environmental issue areas that would have broad system-wide or regional implications (safety, transportation systems, energy, air quality, and cumulative effects) and issue areas that could have county, local, or site-specific effects (safety, traffic and transportation, energy, air quality, noise, cultural and historical resources, hazardous waste sites, natural resources, land use and socioeconomics directly related to physical changes in the environment, and environmental justice).

**Consideration of the No-Action Alternative**. SEA evaluated the No-Action alternative as the "base case" or "pre-Acquisition" scenario against which the proposed Acquisition-related changes are to be measured. The railroads' existing systems and operations would remain essentially unchanged, except for changes resulting from normal railroad business and market activity. None of the anticipated beneficial or adverse environmental impacts of the proposed Acquisition would occur.

**Determination of Significance**. For this Draft EIS, SEA developed criteria for determining the significance of impacts for each environmental issue area, based on applicable regulations, standards, and SEA's best professional judgment. SEA considered mitigation measures to address those potential environmental effects that would exceed these criteria.

<sup>&</sup>lt;sup>4</sup> SEA will consider comments received after November 1, 1997 in preparing the Final EIS.

**Consideration of Inconsistent and Responsive Applications**. SEA reviewed the potential environmental impacts resulting from actions proposed in the 15 Inconsistent and Responsive (IR) Applications that have been submitted to the Board. IR Applications are proposals by other parties requesting modifications or alternatives to the proposed Conrail Acquisition, such as requests for trackage rights.

IR Applicants were required to submit either a Verified Statement indicating that their proposal would not have significant environmental impacts, or a Responsive Environmental Report (RER) addressing environmental issues if their IR Applications included activities that would meet or exceed the Board's thresholds for environmental analysis. SEA reviewed the Verified Statements and RERs and has concluded that there are no significant environmental impacts that would result from the actions proposed in the IR Applications.

**Evaluation of Areas of Special Concern**. SEA conducted additional analyses and site visits to examine potential environmental impacts and public concerns in certain communities because of their unique circumstances. These communities include the following:

- · Chicago, Illinois.
- · West Cleveland Suburbs, Ohio.
- · Cleveland, Ohio.
- Erie, Pennsylvania.
- · Gary, East Chicago, Hammond, and Whiting, Indiana.
- Muncie, Indiana.
- Lafayette, Indiana.
- Newark, Delaware

Analysis of the Areas of Special Concern come at the end of the appropriate state sections in Chapter 5, "State Setting, Impacts, and Proposed Mitigation."

**Development of Preliminary Mitigation Recommendations**. Where potentially significant adverse environmental impacts were identified, SEA developed mitigation measures to offset or reduce those impacts. SEA also recommended mitigation to address environmental concerns in communities with unique circumstances where warranted. Preliminary system-wide, regional and site-specific mitigation measures are summarized in Section ES.6.2 of this Executive Summary.

## ES.5 Public and Agency Outreach

As part of the environmental review process, SEA has conducted extensive public outreach activities to inform the public about the proposed Conrail Acquisition and to facilitate public participation. SEA consulted with Federal, state, and local agencies, and affected communities to gather and disseminate information about the proposal. In addition, in preparing the Draft EIS, SEA conducted consultations with government agencies. Details of these public and agency outreach and consultation efforts are included in Chapter 6.

## ES.5.1 Public Scoping Process

SEA consulted with Federal, state and local agencies, and the public on the scope of its environmental analysis in this case. SEA distributed the draft scope to approximately 1,900 Federal, state, and local elected and agency officials and published a scoping notice and request for comments in the *Federal Register*. SEA also distributed a press release to almost 200 newspapers in the 24 affected states, and placed legal notices in 800 newspapers with the highest circulation for each of the potential affected counties.

SEA received more than 170 comments concerning the draft scope and cousidered all comments in developing the final scope of the EIS. This draft EIS reflects the fin <sup>1</sup>/<sub>2</sub> ope as published in the *Federal Register* on October 1, 1997 (*Federal Register*, Vol. 62, No 190, p. 51,500).

## ES.5.2 Agency Consultation and Public Information

In addition to the scoping activities, SEA consulted with several Federal agencies, including EPA and FRA, on applicable regulations, analysis methodologies, and mitigation approaches. SEA also consulted with dozens of local, regional, and state agencies, including local planning departments, Amtrak, commuter agencies, and departments of transportation. Appendix M lists the agency consultation contacts during preparation of this Draft EIS.

SEA also prepared and distributed a Fact Sheet (in English and Spanish) describing the proposed transaction to approximately 7,000 elected officials, agencies, and organizations for cities and counties potential affected by the proposed Acquisition. To further assist input from the public, SEA provided a toll-free environmental hotline ((888) 869-1997), established an Internet website (www.conrailmerger.com), and initiated media monitoring services that involved a weekly review of newspaper articles. SEA also conducted more than 170 site visits to assess local conditions and potential environmental impacts. Finally, SEA established a comprehensive database to record and maintain all comments received in writing, via telephone, or through the website. As of November 1, 1997, SEA has received from approximately 800 interested party comments that contain more the 1,600 separate environmental issues related to the proposed Conrail Acquisition.

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# ES.5.3 Draft EIS Distribution

EPA has published a notice of availability of the Draft EIS in the *Federal Register* in accordance with NEPA. In addition to the *Federal Register* notice, SEA has concurrently mailed the Draft EIS to more than 2,300 Federal, state, county, and local officials and agencies, Amtrak, commuter service agencies, and other interested parties. Notices of the availability of the Draft EIS have been sent to approximately 7,000 other interested parties. SEA has also distributed a press release to newspapers in the affected counties and has updated the website information about the availability of the Draft EIS and how to submit comments to SEA.

# ES.5.4 Additional Public Outreach

To ensure that minority and low income communities that may have potentially disproportionate high and adverse impacts have full opportunity to participate in the review of the proposed Conrail Acquisition, SEA is conducting expanded outreach in 16 communities listed below. The expanded outreach includes providing additional notification to affected communities and neighborhoods, translating information materials into appropriate languages, and providing additional availability of the Draft EIS. Copies of the detailed public outreach plans for the following communities can be found in Appendix K:

- Illinois: Blue Island, Chicago, Danville, and Tilton.
- Indiana: Gary, Fort Wayne, and Lafayette.
- Maryland: Baltimore, Bladensburg, and Hyattsville (and surrounding areas in Prince George's County).
- · Ohio: Ashtabula, Cleveland, Youngstown, and Toledo.
- Pennsylvania: Harrisburg.
- Washington, D.C.

# ES.6 SEA's Preliminary Conclusions and Recommended Mitigation Measures

# ES.6.1 SEA's Approach to Mitigation

As noted above, the Board has broad authority to impose mitigating conditions. However, as a government agency, the Board's authority is not limitless. Any environmental mitigation conditions must be: (1) reasonable, (2) directly related to the action proposed for approval, and (3) supported by the information developed during the environmental analysis.

It is the Board's policy to require mitigation only for those potential impacts that would result form a proposed merger or acquisition (e.g., the effects of changes in rail traffic). The Board does not impose mitigation to remedy pre-existing environmental impacts unless the Applicant and the affected community reach agreement on how to fund any option to mitigate these preexisting environmental impacts.

SEA believes that many of the potential environmental impacts identified in this Draft EIS could most effectively be resolved through mutually-acceptable agreements achieved following negotiations among the Applicants, the locally affected community, and the appropriate government agencies. These negotiated solutions may go beyond what the Board might otherwise be able to impose. Accordingly, SEA encourages these parties to review the analysis and mitigation presented in this Draft EIS and seek negotiated solutions to environmental concerns. SEA requests that the parties advise SEA as soon as possible regarding any agreements reached so that the agreements can be reflected in the Final EIS.

The Final EIS will contain SEA's final recommended system-wide, regional, and site-specific environmental mitigation conditions. The Board will then consider SEA's recommendations in deciding whether to approve the proposed Acquisition and, if so, whether to impose SEA's recommended mitigation as a condition to its approval.

## ES.6.2. Summary of Potential Environmental Impacts and Preliminary Mitigation Recommendations

SEA's analysis of the proposed Conrail Acquisition includes system-wide, regional, local, and site-specific environmental impacts. System-wide and regional impacts, including safety, traffic and transportation, energy, and air quality, are described in Chapter 4, "System-wide Setting. Impacts, and Proposed Mitigation." Local or site-specific impacts are described in Chapter 5, "State Setting, Impacts, and Proposed Mitigation" and are organized by state. The following summary describes potential system-wide, regional and site-specific environmental impacts that SEA believes are significant and SEA's preliminary recommended mitigation. This section is organized by environmental issue area. The summary discusses the following issue areas:

- Safety, including freight operations, passenger operations, highway/rail at-grade crossings, hazardous materials transportation, and safety integration planning.
- Traffic and Transportation, including passenger rail capacity, highway/rail at-grade crossing traffic delay, roadway systems impacts, and navigation.
- · Energy.
- · Air Quality.
- Noise.

- Cultural and Historic Resources.
- Hazardous Materials and Waste Sites.
- Natural Resources.
- Land Use and Socioeconomics, including Native American lands.
- Environmental Justice.
- Cumulative Effects.

## Safety

Safety is a paramount concern. SEA has evaluated safety-related impacts that could reasonably be expected to result from the proposed Conrail Acquisition in four specific issue areas: (1) freight rail operations, (2) passenger rail operations, (3) highway/rail at-grade crossings, and (4) hazardous materials transportation. For each of these issue areas, SEA analyzed potential adverse environmental impacts and considered whether any measures are warranted to mitigate those impacts. The potential impacts on safe rail operations resulting from the consolidation and integration of three separate railroad companies into two expanded railroads and the joint operations of the Shared Assets Areas are also discussed below under Safety Integration Planning. SEA's system-wide evaluation of the Application encompassed more than 1,000 rail line segments and approximately 400 rail yards and intermodal facilities, collectively handling over 100,000 rail cars per day.

**Freight Rail Operations**. SEA evaluated potential changes in the risk of freight train accidents for 54 rail line segments that would meet or exceed the Board's thresholds for environmental analysis of an increase in eight or more trains per day. Based on this evaluation, SEA identified rail line segments with significant effects as possible candidates for mitigation measures. These rail segments include those segments where, if the proposed Acquisition were approved and implemented, an accident is predicted to occur more frequently than once every 100 years per mile of track. SEA determined that seven segments in the States of Indiana. Ohio, and Pennsylvania would qualify for mitigation consideration. SEA intends to recommend that the Board require CSX and NS to conduct internal rail flaw inspections on these rail segments using the FRA's proposed rule for con-mile based track inspections (49 CFR Part 213.237, Docket No. RST-90-1). The proposed rule would require railroads to complete internai rail flaw inspections on a rail segment at least once every 40 million gross ton-miles of rail traffic, or annually, if more frequent. FRA states that this interval is the maximum safe rail traffic volume interval between rail flaw inspections that would identify rail flaw defects before they deteriorate and contribute to a rail accident.

SEA also intends to recommend that CSX and NS be required to provide annual training programs on inspection requirements for the mechanical inspectors at the yards that dispatch trains over these seven rail line segments and for the track inspection force responsible for inspecting these rail lines.

On a system-wide basis, approximately 60 percent of the Applicants' rail line segments would have the same number of trains or fewer trains after the proposed Conrail Acquisition compared with current train traffic. The volume of cars switched in rail yards would decrease at over half of the yards. Overall, on a system-wide basis, the proposed Acquisition would result in a small increase in the total operating train-miles and a small decrease in the number of rail cars handled at rail yards. This change would result in no measurable increase in the risk of freight accidents for the system. Based on available information and its independent analysis. SEA believes that the proposed Conrail Acquisition would not result in significant adverse system-wide safety effects from freight rail operations.

**Passenger Rail Operations**. SEA considered the impacts of Acquisition-related changes in freight train traffic on passenger rail line segments. SEA's analysis showed that freight traffic would increase on 108 rail line segments, comprising 4.359 miles, and remain the same or decrease of 89 rail segments, comprising 3.545 miles. SEA's analysis of rail line segments with an increase of one or more freight trains per day shows that nine rail segments (five CSX segments and four NS segments) would experience a significant increase in accident risk resulting from the proposed Acquisition. SEA determined that mitigation measures would be appropriate to reduce potential saf ity impacts on those rail segments expected to have a 25 percent increase in accident rate and a predicted likelihood of a passenger train/freight train accident more frequently than once every 150 years for the whole line segment.

SEA intends to recommend that the Board require CSX to establish passenger trains as "superior" trains on the five identified CSX rail segments in Georgia, Maryland, North Carolina, Virginia, and Washington, D.C. That would mean that all trains moving in the same and opposite directions 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 a train is moving in the opposite direction away from a passenger train. SEA intends to recommend that the same mitigation measure be imposed on four NS lines in Indiana. Michigan, and New York. Because the increased traffic on the NS rail corridor from Porter. Indiana to Chicago, Illinois would result from potential Canadian Pacific trackage or haulage rights. SEA recommends that this mitigation measure be imposed for this corridor only if these trackage or haulage rights are granted by Board order or by agreement between the two railroads.

**Highway/Rail At-Grade Crossings**. SEA evaluated potential train-vehicle accident risk at all highway/rail at-grade crossings on the 54 rail line segments expected to meet or exceed the Board's environmental analysis threshold of eight or more trains per day. Accordingly, SEA evaluated more than 2,000 crossings. To identify possible candidates for site-specific mitigation measures. SEA established two levels of increases in accident frequency likely to result in a

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significant impact. First, SEA considered mitigation for those highway/rail at-grade crossings that would have a predicted increase in accident frequency of one additional accident every 20 years. Second, for highway/rail at-grade crossings that already have a high predicted accident frequency based on current vehicle traffic and railroad operations, SEA determined that a smaller increase in accident frequency would provide a more conservative measure of significance. For these crossings, SEA considered mitigation if the accident frequency increased by one additional accident every 100 years. SEA considered a highway/rail at-grade crossing to have high predicted accident frequency if the crossing was within the top 50 crossings in the state for accident frequency or would experience one accident every seven years. SEA identified 118 highway/rail at-grade crossings in Illinois, Indiana, Kentucky, Maryland, Michigan, New York, Ohio, Pennsylvania, and Virginia that meet this level of significance. SEA intends to recommend that the Board impose a condition requiring the Applicants to upgrade the crossing warning devices at these 118 crossings as follows:

- Upgrade crossings with existing passive warning devices to flashing lights.
- Upgrade crossings with existing flashing lights to gates and flashing lights.
- Upgrade crossings with existing gates and flashing lights to four-quadrant gates or gates with median barriers.

By upgrading the warning devices one level of protection at each of these 118 highway/rail atgrade crossings, the post Acquisition accident risk would be at or below the pre-Acquisitionrisk.

SEA believes that safety at highway/rail at-grade crossings could be improved if a mechanism were in place to notify the railroads of stopped vehicles and other obstructions that could create safety risks for motorists and train operations. Improved notification to the railroads would help ensure a prompt repair response and reduce the likelihood of accidents. Accordingly, SEA intends to recommend that the Board require the Applicants to install, at all public highway/rail at-grade crossings with active warning devices, signs that indicate (1) a toll-free telephone number for the public to report highway/rail at-grade crossing problems and (2) a unique crossing identification number.

**Hazardous Materials Transportation**. SEA evaluated all rail line segments expected to have an increase in the transport of hazardous materials. It should be noted that on November 24, 1997. CSX advised SEA that the hazardous materials transportation data it had provided me have been overstated by as much as 20 percent. As a result, the affected rail line segments are recommended mitigation in the Draft EIS may be different in the Final EIS. Based on its evaluation to date, SEA identified 65 rail line segments that would become key routes as a result of the proposed Acquisition (i.e., would increase to more than 10,000 cars of hazardous materials per year). These 65 rail line segments are 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. SEA intends to recommend that, before CSX and NS increase hazardous materials transportation on these rail segments or in these corridors, they be required to comply with the Association of American Railroads (AAR) key route guidelines (AAR Circular No. OT-55-B) and any more stringent key route requirements established by the operating railroad. These AAR guidelines include visual rail defect inspections at least twice per week, employee training in hazardous materials hand<sup>1</sup>ing and equipment inspection, defective wheel bearing detectors at least every 40 miles of track, and other preventative measures. These AAR guidelines also include recommended operating procedures for key trains, which carry a certain number of hazardous materials tank cars, including 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.

SEA also identified 52 rail line segments where hazardous materials traffic would at least double and be greater than 20,000 cars per year. SEA has identified these routes as "Major Key Routes." These rail line segments are located in Alabama, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Mississippi, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, and Tennessee.

Based on the information available to date, SEA intends to recommend that CSX and NS be required to prepare Hazardous Materials Emergency Response Plans for each emergency response organizationalong these key routes and "Major Key Routes" and implement a real time or desktop simulation emergency response drill with voluntary participation of local emergency response teams at least once every two years for each "Major Key Route." SEA intends to further recommend that CSX and NS be required to provide a toll-free telephone number to emergency response personnel for each community along these key route and "Major Key Route" rail line segments. The toll-free number would provide direct access to dispatch centers where local response personnel could quickly obtain information about the contents and appropriate response procedures in the event of a train accident or hazardous materials release.

On a system-wide basis, due to the more efficient routes that would be created, the proposed Conrail Acquisition would result in the transportation of approximately one percent fewer rail car-miles of hazardous materials, which in turn should result in a very small decrease in hazardous materials releases due to derailments. In addition, the proposed expansion of singleline rail service, allowing grouping of rail cars for longer trips with fewer required car switching movements, would result in a four percent system-wide decrease in freight-car handling in rail yards. This decrease also is expected to result in an immeasurably small reduction in hazardous materials releases. Thus, overall, the proposed Acquisition should result in a slight safety improvement for rail transportation of hazardous materials and no significant system-wide adverse impacts related to hazardous materials transport.

SEA also examined hazardous materials handling practices for the rail yards and intermodal facilities that meet or exceed the Board's environmental thresholds. SEA determined that the Applicants currently have procedures for hazardous materials handling and spill response at these facilities. Nevertheless, SEA intends to recommend that the Board require CSX and NS

to establish a formal Failure Mode and Effects Analysis for reducing risk of spills both for storage and transport of hazardous materials at all rail yards and intermodal facilities.

**Safety Integration Planning**. Concerns have been raised by FRA and others regarding safety integration planning for combining the three Applicants – Conrail, CSX, and NS – into two expanded companies and for jointly operating the Shared Assets Areas. Responding to these concerns, the Board directed the Applicants to submit Safety Integration Plans by December 3, 1997. The Applicants' Safety Integration Plans are included in Volume 2. SEA invites comments from FRA and the public on the adequacy of the Safety Integration Plans. SEA will develop any additional safety mitigation measures after reviewing the plans and the public comments. The Final EIS will include any final mitigation in this area.

## **Traffic and Transportation**

**Passenger Rail Service**. SEA has determined that all of the rail line segments used by Amtrak have sufficient capacity to accommodate projected increased numbers of freight trains while also meeting contractual commitments to Amtrak. Therefore, SEA does not believe there would be any significant Acquisition-related impact on intercity passenger rail service. SEA has also evaluated the capability of any rail line with current commuter rail service and a projected increase in freight traffic of one or more trains per day to accommodate an increase of freight service without a disruption to the commuter service. Based on a review of the projected train traffic, number of tracks, and train signal control systems, SEA has concluded that there would be no significant potential system-wide, regional, or local capacity impacts to commuter rail service. Each of the rail line segments with commuter trains can accommodate the proposed Acquisition-related increase in freight traffic.

**Traffic Delay at Highway/Rail At-Grade Crossings**. On the 119 rail line segments that would meet or exceed the Board's thresholds for environmental analysis. SEA evaluated traffic delay at all highway/rail at-grade crossings with an Average Daily Traffic (ADT) count of 5,000 or more vehicles. Based on the information available and an evaluation of more than 300 crossings, it is SEA's preliminary determination is that the proposed Conrail Acquisition would result in a significant adverse impact on traffic delay at 38 highway/rail at-grade crossings located in the States of Illinois, Indiana, Kentucky, Maryland, Ohio, and Pennsylvania.

To determine significant impacts, SEA established criteria for assessing vehicle delay 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>5</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 intends to recommend that the Board require the Applicants to implement one of four approaches to address traffic delay impacts at these locations, as follows:

- Improvements to track and train signal systems to allow increased train speed at eight locations in the States of Indiana, Maryland, and Ohio. Where appropriate, SEA also intends to recommend additional grade crossing warning device improvements to ensure that the trains would be operated safely at the increased speeds.
- Separated grade crossings (constructing overpasses or underpasses) at five crossings located in the States of Illinois. Indiana, and Kentucky.
- Rerouting of train traffic to an alternate route in Erie, Pennsylvania, and Lafayette, Indiana, to address 15 highway/rail at-grade crossings with significant traffic delay impacts.
- 4. Consultation with local officials and the state departments of transportation to determine the most appropriate measure to address traffic delay impacts a' ten locations in the States of Illinois. Indiana, Ohio, and Pennsylvania where increased train speed is not feasible and Acquisition-related impacts do not appear to justify a grade separation.

Where separated grade crossings appear to be warranted by the Acquisition-related traffic delay impacts and the community agrees that a separated grade crossing is appropriate. SEA is also considering recommending that the Board require the Applicants to participate in mediation and binding arbitration with local and state officials, and assume the costs for such mediation and arbitration, to determine the appropriate allocation of funding for planning, construction, and land acquisition. SEA invites comments on such a negotiation-mediation-binding arbitration funding process.

**Roadway System**. The proposed Conrail Acquisition is expected to benefit the national and regional highway systems by reducing truck traffic on major state, regional, and U.S. highways. According to the Applicants, the diversion of freight from trucks on these major roadways to freight trains on the expanded CSX and NS systems would result in part from new or expanded intermodal facilities, including the use of intermodal facilities closer to markets. The proposed Acquisition also is expected to provide many shippers with more efficient direct long-haul rail service.

Proposed Conrail Acquisition

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.

SEA evaluated the Acquisition-related increase of truck traffic to the three proposed rail line abandonments, which could result in rail-to-truck diversions. SEA also evaluated potential truck traffic impacts near 23 intermodal facilities located in the States of Georgia, Illinois, Kentucky, Louisiana, Maryland, Michigan, Missouri, New Jersey, Ohio, Pennsylvania, and Tennessee, where the Acquisition-related increase in local truck activity is expected to meet or exceed the Board's thresholds for environmental analysis. SEA considered the capacity of the anticipated truck routes and the planned increase in truck traffic. Based on this evaluation, SEA's preliminary conclusion is that the local road ways can adequately handle the increased truck traffic.

**Navigation**. SEA evaluated 13 movable bridges on 11 rail line segments where Acquisitionrelated increases in railroad traffic would meet of exceed the Boards' thresholds for environmental analysis. These bridges are located in the States of Indiana, New Jersey, Ohio, Pennsylvania. Tennessee, and Washington, DC. Because the U.S. Coast Guard has jurisdiction over these moveable bridges and because ships have right-of-way over trains under Coast Guard regulations, SEA determined that there would be no system-wide or site-specific adverse impacts on navigation. including service to coastal and inland ports.

## Energy

SEA evaluated the potential impact of the proposed Acquisition on the consumption of energy resources, primarily diesel fuel. SEA analyzed the Acquisition-related truck-to-rail diversions and related increased train traffic and determined that the proposed Conrail Acquisition would result in a net annual reduction in fuel consumption of approximately 80 million gallons of diesel fuel.

SEA also considered the effect of the proposed Conrail Acquisition on the Transportation of energy resources and recyclable commodities. SEA does not anticipate substantial changes in the quantities of energy resources or recyclable commodities transported.

SEA also evaluated projected increases in vehicle delay at highway/rail at-grade crossings for adverse energy impacts. SEA determined that overall there would be no significant system-wide changes regarding energy use due to vehicle traffic delays at highway/rail at-grade crossings.

## Air Quality

SEA evaluated air pollutant emissions on a county-wide basis for all rail line segments exceeding the Boards' thresholds for air quality analysis. For counties where pollutant emissions increases were projected to exceed the emissions thresholds SEA used. SEA conducted a "netting" analysis, totaling both emission increases and decreases in detail. All rail-related activities were evaluated and emissions decreases due to truck-to-rail diversions were taken into account. In counties where there were potentially significant net increases in emissions. SEA examined regional air quality issues and EPA-authorized nitrogen oxides (NO<sub>x</sub>) emission waivers. Based

on its analysis, SEA determined there would be no significant impact on air quality resulting from the proposed Conrail Acquisition. SEA intends to recommend, however, that the Board require CSX and NS to implement fugitive dust control measures at the 18 construction sites and the four abandonment salvage activity sites evaluated in this Draft EIS.

While the proposed Conrail Acquisition would reduce emissions for most air pollutants. SEA estimated that sulfur dioxide (SO<sub>2</sub>) emissions would increase by about 520 tons per year. SEA considers this increase insignificant compared to the millions of tons of SO<sub>2</sub> emitted by stationary sources in the states affected by the proposed Conrail Acquisition.

## Noise

SEA evaluated 71 rail line segments that would meet or exceed the Board's thresholds for noise analysis. SEA examined impacts from train noise along rail line segments. Train horn noise is a deliberate action to enhance safety along the rail lines and is governed by FRA regulations. Safety is an overriding concern and train horn noise cannot be reduced or eliminated without jeopardizing safety at highway/rail at-grade crossings. FRA will be developing new regulations establishing a process for communities and railroads to receive FRA approval for alternatives to train horns, such as four-quadrant gates or paired one-way streets at highway/rail at-grade crossings. Until such regulations are in place, SEA does not believe it would be appropriate to recommend mitigation measures to reduce horn noise because of safety implications.

Mitigation measures may be appropriate, however, to alleviate Acquisition-related train noise engine and wheel noise impacts. SEA identified a total of seven rail line segments in Ohio and Michigan where the post-Acquisitionengine and wheel noise levels would be above 70 decibels (dBA) or higher and would increase five dBA or more above pre-Acquisition levels. SEA recommends that the Board require CSX and NS to consult with local communities along these seven rail line segments to identify appropriate measures (e.g., noise barriers, building sound insulation, and track lubrication) to reduce train engine and wheel noise impacts. SEA encourages the parties to reach agreement on the measures and the appropriate allocation of funding, and report back to SEA prior to SEA issuing the Final EIS. SEA invites the public to provide comments on what appropriate mitigation could be required in the event that the Applicants and communities cannot reach agreement.

## Cultural and Historic Resources

SEA identified significant historic resources at two sites: Collinwood Intermodal Facility in Cleveland, Ohio, and the Toledo Pivot Bridge in Toledo, Ohio. SEA recommends that the Board require CSX to complete cultural and historic documentation (Historic American Building Survey (HABS)/Historic American Engineering Record(HAER) Level II) at the proposed Collinwood Intermodal Facility within 180 days of any Board decision approving the proposed Conrail Acquisition. SEA recommends that the Board require NS to complete cultural and

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historic resource documentation (HABS/HAER Level II) for the Toledo Pivot Bridge before initiating and construction or removal activities at that site.

SEA further recommends that the Board require CSX to maintain its interest in and take no steps to alter the 75<sup>th</sup> Street Interlocking Tower in Chicago, Illinois, until the completion of the Section 106 of the National Historic Preservation Act (16 U.S.C. 470f) at that site. For the Shell Pot Bridge near Wilmington, Delaware, and the new rail line connection in Exermont, Illinois, the Board is still undertaking the historic preservation consultation process required by the Section 106 process. Therefore, SEA recommends that the Board prohibit NS or CSX from initiating any construction or modification at these sites until the Section 106 consultation process is complete.

## Hazardous Materials and Waste Sites

SEA identified the existing hazardous waste sites within 500 feet of the Acquisition-related rail line construction activities or abandonment proposals in the States of Illinois, Indiana, Maryland, Michigan, New Jersey, New York, and Ohio. The Applicants would have to comply with Federal and state statutes requiring investigation and remediation of these sites prior to or during construction. SEA does not intend to recommend any additional mitigation measures.

## Natural Resources

SEA reviewed the potential impacts on water resources, wetlands, habitats, and threatened or endangered species for the Acquisition-related construction and abandonment projects. SEA has identified the potential presence of threatened or endangered species near the proposed new rail line construction in Vermilion, Ohio. SEA has identified no other potentially significant natural resource impacts. SEA recommends that the Board require NS, in consultation with the U.S. Fish & Wildlife Service and the Ohio Department of Natural Resources, to conduct a survey to determine the potential presence of the endangered Indiana Bat.

Construction activities are also governed by other Federal and state statutes, such as Section 404 of the Federal Clean Water Act (permitting for construction in wetlands). These laws, which require the Applicants to acquire applicable permits, should assure the protection of natural resources in the vicinity of their proposed construction and abandonment projects. The Applicants also have established Best Management Practices for construction and abandonment activities. SEA has reviewed these practices and recommends that the Board require the Applicants to abide by them during any Acquisition-related construction or salvage activities. SEA believes the permitting requirements and this mitigation would effectively mitigate and potential significant adverse impacts on natural resources.

## Land Use/Socioeconomics

SEA has evaluated potential impacts on existing land use plans, prime farmlands, Native American lands, Coastal Zone Management plans, and on socioeconomics resulting from physical changes to the environment from planned Acquisition-related construction and abandonment activities. SEA also examined the suitability of rights-of-way proposed for abandonment for alternative public use. Based on the available information, SEA has determined that there are no significant impacts on land use, socioeconomics, or Native American lands.

## **Environmental Justice**

Although the President's directive on Environmental Justice in Executive Order 12898 of 1994 technically does not apply to independent agencies like the Board, SEA has evaluated the potential significant environmental impacts to determine if they could result in disproportionately high and adverse impacts on minority and low income communities. SEA reviewed demographic information in the vicinity of all Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis. SEA has concluded that there are 15 Acquisition-related activities that may result in a disproportionately high and adverse impact on minority or low income communities. There areas include the following:

- · Blue Island, Chicago, Danville, and Tilton, Illinois.
- · Gary, Fort Wayne, and Lafayette, Indiana.
- · Baltimore, Bladensburg, and Hyattsville, Maryland.
- Ashtabula, Cleveland, Toledo, and Youngstown, Ohio.
- · Harrisburg, Pennsylvania.
- Washington, D.C.

Accordingly, SEA has initiated additional comprehensive public information and outreach efforts to inform the communities adjacent to these activities of this Draft EIS and the opportunities for public review and comment. These efforts have included translation of information materials into Spanish and other languages and community notification through fliers, community newspapers, community centers, and radio announcements. Many of SEA's recommended mitigation measures would address potential significant environmental impacts in those low income and minority communities. SEA also recommends that the Applicants consult with affected minority and low income communities as soon as possible after SEA issues this Draft EIS to identify and reach agreement on implementation and funding allocation for additional mitigation measures to further offset the potential environmental justice impacts.

## **Cumulative Effects**

SEA has reviewed past, present, and planned projects and activities that could, when considered with potential impacts on the proposed Conrail Acquisition, result in significant system-wide or regional cumulative effects on air quality, safety, and transportation systems. Based on a review of past, present, and planned projects and activities and the potential environmental impacts of the proposed Conrail Acquisition, SEA's preliminary conclusion is that there are no significant cumulative effects in any of these issue areas.

## **Additional Mitigation**

In addition to the recommended mitigation described above, SEA developed preliminary recommended general mitigation measures to address potential impacts at proposed locations for rail line construction and proposed abandonments. SEA also developed preliminary recommended mitigation measures to address issues in specific communities with unique circumstances. These additional mitigation measures, along with SEA's preliminary recommended system-wide, regional, and site-specific mitigation, are described in Chapter 7 of this Draft EIS.

## ES.7 Comments on the Draft EIS

The public and any interested parties are encouraged to make comments on this Draft EIS. SEA will consider all comments in preparing the Final EIS, which will include SEA's final conclusion on potential significant impacts and SEA's final recommendation. All comments must be submitted within the 45-day comment period, which will close February 2, 1998. SEA specifically invites comments on the Safety Integration Plans, which are included in Volume 2 of this Draft EIS. When submitting comments on the Draft EIS, the recommended mitigation, and/or Safety Integration Plans, please be as specific as possible and substantiate your concerns and recommendations. To file your comments, please send one original and ten copies to:

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

Please write the following in the lower left hand corner of the envelope: Attention: Elaine K. Kaiser Environmental Project Director Environmental Filing

# ATTACHMENTS

- ES-A SEA's Thresholds for Environmental Analysis
- ES-B Master Table of All Rail Line Segments

ES-C Q and A Fact Sheet

Proposed Conrail Acquisition

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		Acti	vities Evaluated	for Potential E	nvironmental I	mpacts
	Environmental Impact Category	Rail Line Segments	Constructions	Intermodal Facilities	Rail Yards	Abandonment
s	AFETY					-
•	Freight Rail Operations	All rail segments with an increase of 8 or more trains per day.	NA	All intermodal facilities.	All rail yards.	NA
•	Passenger Rail Operations	Segments with existing passenger rail traffic with an increase of one or more freight trains per day.	NA	NA	NA	NA
	Highway/Rail At- Grade Crossing Safety	All at-grade highway/rail crossings on roadways with average daily traffic of 5,000 or more vehicles on segments that meet the Board's environmental thresholds <u>and</u> all crossings on segments with an increase of 8 or more trains per day.	All at-grade highway crossings affected by construction.	NA	NA	All highway/rail at-grade crossings affected by abandonments.
	Hazardous Materials Transport	All segments with hazardous materials transport.		All intermodal facilities.	All rail yards.	NA

	Acti	vities Evaluated	for Potential Envir	onmental I	mpacts
Environmental Impact Category	Rail Line Segments	Constructions	Intermodal Facilities	Rail Yards	Abandonments
TRAFFIC AND TRAN	SPORTATION				
<ul> <li>Passenger Rail Service</li> </ul>	Segments with existing passenger rail traffic with an increase of one or more freight trains per day.	NA	NA	NA	NA
<ul> <li>Highway/Rail At- Grade Crossing Traffic Delay</li> </ul>	At-grade highway crossings on segments that meet or exceed the Board's environmental thresholds and with roadway average daily traffic of 5,000 vehicles or greater.	New at-grade highway crossings created by proposed constructions.	NA	NA	At-grade highway crossings on abandoned line segments.
Roadway Capacity	NA	NA	Intermodal facilities with an increase of 50 or more trucks per day <u>or</u> 10% increase in average daily traffic on affected roadways. FN	NA	All abandonments with rail-to-truck diversions.
Navigation	Movable-span bridges on segments that meet or exceed the Board's environmental thresholds.	NA	NA	NA	All abandonments with movable- span bridges.

	Activ	ities Evaluated	for Potential Er	vironmental In	pacts
Environmental Impact Category	Rail Line Segments	Constructions	Intermodal Facilities	Rail Yards	Abandonments
ENERGY	System-wide analysis of truck- to-rail diversions.	NA	Intermodal facilities that meet or exceed the Board's environmental thresholds.	Rail yards that meet or exceed the Board's environmental thresholds.	All abandonments resulting in rail- to-truck diversions of more than 1,000 rail carloads pcr year <u>or</u> an average of 50 rai carloads per mile per year for any part of the affected line. FN
AIR QUALITY					
Attainment Areas	Segments with an increase of 8 or more trains per day <u>or</u> at least a 100% increase in annual gross ton miles. For specific emissions thresholds, See Appendix E, "Air Quality" FN	All constructions.	Intermodal facilities with an increase of 50 or more trucks per day or a 10% increase in average daily traffic on affected roadways. FN	Rail yards with a 100% or greater increase in carload activity per day. FN	All abandonments.
• Nonattainment Areas	Segments with an increase of 3 or more trains per day <u>or</u> at least a 50% increase in annual gross ton miles. For specific emissions thresholds, see Appendix E, "Air Quality" FN		Intermodal facilities with an increase of 50 or more trucks per day <u>or</u> a 10% increase in average daily traffic on affected roadways. FN	Rail yards with a 20% increase in carload activity per day. FN	All abandonments.

	Activ	ities Evaluated	for Potential En	Tronmental Im	pacts
Environmental Impact Category	Rail Line Segments	Constructions	Intermodal Facilities	Rail Yards	Abandonments
NOISE	Segments with an increase of 8 or more trains per day <u>or</u> at least 100% increase in annual gross ton miles. FN	All constructions.	Intermodal facilities with an increase of 50 or more trucks per day or a 10% increase in average daily traffic on affected roadways. FN	Rail yards with a 100% increase in carload activity per day. FN	NA
CULTURAL RESOURCES	NA	All constructions.	NA	NA	All abandonments.
HAZARDOUS WASTE SITES	NA	All constructions.	NA	NA	All abandonments.
NATURAL RESOURCES	NA	All constructions.	NA	NA	All abandonments.
LAND USE/ SOCIOECONOMICS	NA	All constructions.	NA	NA	All abandonments.
ENVIRONMENTAL JUSTICE	All segments that meet or exceed any threshold for environmental impact analysis.	All constructions.	Intermodal facilities that meet or exceed the Board's environmental thresholds.	Rail yards that meet or exceed the Board's environmental thresholds.	NA

NA = Not Applicable

FN = Surface Transportation Board threshold for environmental analysis (49 CFR 1105.7 (e))

Rail Line Segments and Traffic Density Changes

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045	CR	CSX	Field	PA.	Bermant	PA	4	0.0	82	8.2	0.0	15.8	15.8	76	11.2	20.0	80%	-	1	- +	X	ł
061	CSX	CSX	New Castle	DA.	Youngstown	CH4	18	2.0	32.6	34.6	20	39.6	41.6	7.0	53 B	78.5	46%				-+	İ
097	CSX	CSX	Rankin Jet	PA	New Castle	PA	51	00	28.9	28.9	0.0	38.3	38.3	9.4	413	72.1	74%		x	-	-	İ
-083	CR	CSX	RG	PA	Field	PA	2	00	0.0	00	00	16.0	16.0	16.0	0.0	16 5	1000%	-	1	-+	1	ĺ
-584	CSX	CSX	RG	PA	Wilsmere	DE	26	00	22.9	22.9	0.0	26.4	76.4	3.5	39.7	49.0	23%	2	-	-+	-+	İ
085	CSX	CSX	Sinns	P.A.	Brownsville	PA	38	0.0	1.5	15	0.0	10.8	10.8	93	20	23.3	1055%	x		-		İ
086	CSX	CSX	Sinns	RA	Rankin Jct	PA	9	2.0	30 B	32.8	20	40.2	42.2	9.4	403	716	77%		2	2	x	ĺ
0%0	CSX		Amique	TN	Nashville	TN	16	0.0	40.8	40.8	00	48.4	48.4	7.6	80 1	164 1	30%	R	1	1	1	į
100	CSX	CSX	Doswell	VA	Fredericksburg	VA	37	180	16.2	34.2	18.0	22.8	40 B	6.6	40.7	52.0	28%	2	1			
101	CSX	CSX	Fredericksburg	VA	Potomac Yard	MA	49	30.0	163	46.3	30.0	23.4	53.4	7.1	40.3	51.8	29%	×		*		ļ
	CSX	CSX CSX	Richmond S. Richmund	V.A	Doswell	VA	24	180	17.8	35.8	18.0	248	42.8	70	44 0	53.8	22%			1		
101	CSX	CSX N	ND Tower	W	Rivesville	NC	82	10.01	18.4	28.4	10.0	230	33.0	4.6	47.5	56.0	18%					
290	CSX		Park Jct		RG	PA	4	00	75 0	25	00	34	34	19	36	74	108%	X				ļ
204	CSX		Allismene	DE	Baltimove	MD ND	4	00	25.0	25.0	0.0	156	15.8	-94	44 7	23.8	-47%			_		ļ
252	CSX		sarpers Ferry	WV	Cherry Run	WV	68	12.0	25.9	26.9	0.0	28.8	28.8	19	44.0	50.4	1.4%)	-	_	-		ļ
	CSA		Cherry Run	WV	Cumberland	MD	85		33 3	45.3	120	40.6	52.6	13	58.0	74.8	2995	-		x	-	ļ
-	PSE	CSX	(oungstown	OH	Stering	OH	79	20	32.0	34.6	2.0	31.0	33.0	20	617 538	673	9%	-	-	2	-	ļ
22	CSX	OSX B	Sterling	C)+4	Greenwich	OH	37	20 20 20 20	32.5	34 5	20	32.9	34 9	0.4	54.8	66.5	24%	-	-	×	-	
206	CSX	CSX F	ostona	DH	Deshier	OH	26	201	34.0	36.0	20	37.9	39.9	39	61.0	82 1 70 0	13%	-	-	-	-	ļ
82. 1	C/SX	CSX F	Relay	MD	Pt of Rocks	MD	58	00	93	93	00	92	92	-01	19.1	20.7	15%	-		λ.	-	ļ
	CSX	CSX +	lagerstown	MD	Lurgan	PA	34	0.0	23		00	25	25	02	36	24	-33%	-	-	-	-	ļ
01-1-		CSX P	tagerstown	MED	Cherry Run	MD	19	0.0	30	23	00	2.0	20	-10	60	24	-59			-		ļ
10	CSX	CSX 6	Rockwoold	PA	Johnstown	PA	45	0.0	101	10	0.0	10	10	0.0	0.7	07	O%	-	-	-	-	ļ
11. 24	CSX	CSX L	ester .	DH	Lorain	OH	23	0.0	1.4	1.4	0.0	1.4	14	0.0	0.7	07	0%	-	-	+	+	ļ
17	CSX	CSX S	itering	OH.	Lester	OH	16	0.0	5.3	53	0.0	53	5.3	DD	7.0	7.5	7%	-	+	-+-	-	ļ
104		CSX L	oster	OH	Cleveland	OH	30	0.0	5.8	5.8	0.0	5.8	5.8	0.0	63	7.5	19%	-	+	+	-	j
	CS.		Detroit	M(	Plymbuth	M)	-25	0.0	151	15.1	0.0	123	12.3	-2.8	12.8	111	-13%	-	+	-	+	ļ
			lymouth		Grand Rapids	MI	124	0.0	11.4	114	00	64	64	-50	13.4	9.8	-27%	+	+	-	+	ļ
18 1			mand Rapids	M	Waverty	M)	26	2020	8.2	10.2	20	4.5	65	-37	82	56	-32%	+	+	-	+	ļ
			Vaverly		Porter	IN.	110	20	48	6.8	20	28	48	-20	87	33	-62	-	-	+	+	ļ
_		CSX S	agunaw		Flint	ME	29	0.0	10.0	100	00	12.2	12.2	22	103	12.1	18%	-		1	+	ļ
			bit		History	ML	28	00	128	12.8		140	14 0	12	14.5	178	22%		1	1	1	ļ
			oliy		Wixorn	MI	20		113	113	0.0	12.5	12.5	12	14.5	17.4	20%	-		1		ļ
			Vixom		Pigma It's	ME	12	0.0	12.2	122	00	12.9	12.9	0.7	16.3	18.5	1436	1				ļ
			lymouth	MI	Wayne	MI	8	00	23.6	23.6	00	26.5	26.5	29	510	53.0	4%	1		1		ļ
_			layne	MS	Caneton	MI	15	0.0	22.8	22.8	0.0	24.8	24.8	2.0	44.0	57.4	30%		1			ļ
3.1 1.6		In	amuton	OH	Dayton	OH	34	0.0	25.4	25.4	0.0	26.5	26.5	1.7	49.9	50.4	116					

 $\Lambda$  ). Using the transmission of the source is the part matrix generation and the part matrix generation and

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### Rail Line Segments and Traffic Density Changes

### ATTACHMENT ES-B MASTER TABLE OF ALL RAIL LINE SEGMENTS

			BE TIMEN'S COURT	1020			32.23			PA	SSENG	ER&F	REIGHT	TRAIN	DATA			-	HRE	SHOL	UM	-
	OWNE	RSHIP	SEGM	ENT DE	SCRIPTION			1	1995 BASI	E		POST ACC	NOITIBILIC		MILLIO	N GROSS	TONS (1)	119	7.1	66	2	332
SEG ID	PHE	Post Acq	BETWEE		AND		SEG LENGTH (mi.)	PSGR TRN	FRT TRN	TOTAL	PSGR TRN	PRT TRN	TOTAL	Δ	1995 BASE	POST ACQ	Δ	AIR	NOISE	PSGR TRN	FRT TRN	HAZMAT
-	CSX	CSX	Dayton	OH	Sidney	OH	37	0.0	22.6	22.6	0.0	24.6	24.6	20	44.3	62 B	42%		-	-	-	
1.08	CSX	CSX	Sidney	DH	Lima	OH	-35	0.0	22.6		0.0	15.3	15.3	-7.3	44 3	443	0%	-	-		-	1
outh?	CSX	CSX	Lima	OH	Deshler	OH	33	00	26.5	26.5	08	14.9 37.4	37.4	41	43.6	40.2	19%	-	-	-	-	
1.228 (	CSX	CSX	Fastona	OH	Toledo	OH	29	00	333	33 3 17 8	00	17.4	17.4	0.4	40.0	44.0	10%	-	1		-	1. 9
1.479	CSX.	CSX	Columbus	OH.	Marion	OH.	20	00	11.0		0.0	11.4			40 2	419	4%		-	1		t
100	CSX	CSX CSX	NJ Cabin Cincinnati	OH	Columbus	OH	112	00	28	-	0.0	29	29	0.1	39	4.9	25%					
1041	CSX	CSX	Hampton	VA	Rivanna Jct	VA	80	40	96		40	86	12.6	-10	38.2	37.8						
Lin.	LSX	CSX	Rivarina Jet	VA	Clifton Forge	VA.	229	0.0	98		00	9.7	97	0.1	54.2	53.4						-
6.294	CSX	CSX	Olifton Forge	VA	St Albans	W	195	0.9	9.8	10.7	DB		11.8	11	57.0	597	591		-	×	-	-
CENT	CSX	CSX	St Albans	WV	Barboursville	WV	29	0.9	10.9		0.9		13.7	19	68.1	66.0	-31	-	-	X	-	+
C.2 (P)	CSX	C5X.	Bachoursville	WW.	Humington	WV	10	0.9	13.4		0.9	14.9	15 0	15	71.1	693	2%	1	-	1 X	-	+
C-DAT .	CSX	CSX	Huntington	WV	Kenova	WV	8	0.9			89		17.7	13	62.2 59.1	67.1	11%	+	+	-	-	+
1.04	CSX	CSX	Kenova	WV	Big Sandy Jct	WV	1	0.9	32.5	33.4	0.9		341	20	97.6		-3%	+	-	1	-	t
0.778	CSX	CSX	Big Sandy Jet	KY	Ashland	K.A.	6	09			0.9		33.4	0.0	107 0	103 0	4%	-		1	1	t
	CSX	CSX	Ashland	KY	Russell	KY KY	4	0.9			0.9			20	673	68.4		1	1	-	-	t
2.741	CSX	CSX	Russell NJ Cabin	KY KY	NJ Cabin	KY	121	0.9		84	0.9			11	26.8	30.5	14					T
0.245	CSX	CSX	Cumberland.	MD	Covington W Virginia C	ww	28	0.0			0.0	16.6	16.6	2.6	23.5	311	32%			1		
0.346	CSX	CSX	W Virginia C	WV	MK Jut	WV	46	00	9.4		0.0	120	12.0	2.6	20.0	27 3				-	-	1
0.045	CSX	CSX	MK JET	WW	Gratton	WV	26	00	94	94	0.0	12.0	12.0	28	20.0	273	36 %	1		4	-	-
0.046	CSK	CSX	Grafton	ŴŴ	Berkeley Jct	WW	2	0.0	10.8		0.0			0.0	20.9		11%	-	+	+	+	+
0.247	CSX	CSX	Berkeley Jict	WW	Short Line Jct	WV	21	10.0	3.8		00	38		0.0	74			+	+	+	+	+
0-248	CSX	CSX	Brooklynuice	WW	Short Line Jet	WV	58	0.0	4.6		00	44		10.7	64			-	-	+	-	+
0.044	CSX	CSX	Parkersburg	WV	Brooklyn Jot	WV	55	0.0			00	45		-02	93		0	+	-	+	+	+
	CSX	CSX	Parkersburg	WW	Huntington	WV	34	00	53	E0	00	6.0		0.0	45		4%	1	+			t
	CSX	CSX	Braiskiyn Jet	W	Benwood Jct Charlottesville	WW WA	98	0.0			0.0	15	15	00			9%	1	1	1	1	T
	CSX	CSX	Rivanna ict Charlottesville	VA VA	Chitton Porge	VA	103	0.9	-		0.9				29	34		1-		1		T
	CSX	CSX	Munster	IN	Monan	IN	62	1.4		39	14				30	3.6	19%			1	1	T
0.214	CSX	CSX	Manon	IN.	Lafayette	IN	30	1.4		1 .5 .4	1.4	30	4.4	00	3.8	47	251					L
	CSX	CSX	Lafayette	IN	Crawfordsville	IN	29	1.4	76	80	14			00	8.9						-	
	CSK	CSX	Crawfordsville	IN	Greencastle	IN	31	0.0	40	4.2	0.0		22	20	4.4				-	-	-	
2.218	CSX	CSX	Hamilton	DH	Ind anapolis	114	99	0.6			0.9		59	2.0	5.0		34	-	+	x	-	4
	CSX	CSX	Cincinnati	OH	Mitchell	IN	128	00			0.0	1.7		-5	14			+	-	-	-	+
	CSX	CSX	Mitchell	IN.	Vincennes	IN	62	0.0			0.0				210			-	-	-	-	÷
0.281	CSX	CSX	Vincennes	(N	Salem	IL.	79	8.0	14.2		00	91		-5-	23.7		43	+	+	+	-	÷
0.267	CSX	CSX	Salém	11	E St Louis	J.L.	68 106	00	11.8	-	00			1			291	+	-	-	+	Ŧ
	CSX	CSX	Doltor	12	Danville Terré Baute	IN.	57	80	20.		0.0				40.5			1		1	1	t
5-274	CSX	CSX	Danville Terre Hauté	IN.	Vincennes	10	54	00			0.0			51	403				1	-	1	T
0.255	CSX	CSX	Nashville	TN.	Decatur	AL	118	0.0	217		0.0			1	1 41		A71					T
	CSX	CSX	Decatur	AL	Black Creek	AL	89	00			00				3 38 4	595	55					
0.268	CSX	CSX	Black Crk	AL	Birmingham	AL	5	0.0		337	0.0		310	-2	48 8		371			1		1
	CSX	CSX	Birmingham	AL	Farkwood	AL	12	0.0	32 8	32 8	0.0		307	.2	48.8		381	-	-	-	-	45
	CSX	CSX	Parkwood	AL	Montgomery	AL	87	0.0			0.0		3 943	0.	2 23			1	-	-	-	+
	CSX	CSX	Montgomery	AL.	Flomator	AL	110	0.0		Contraction of the second	0.0			11	7 33		461	-	+	+	-	÷
	CSX	CSX	Anchorage	KY	Winchester	KY	95	00			0.0		33	0	-	4 6		+	-	+	+	÷
	CSX	CSX	Winchester	KY	Тура	KY	123	10			00		-	01	386			+	+	+	+	÷
1.2.4	CSX	CSX	Гуро	KY.	N Hazard	KY	0	10			00							+	+	+	+	Ť
	CSX	CSX	N Hazard	KY KY	Lotheir. Jeff	KY		00							184			+	-	1	1	T
- 100	CSA	CSX	Jeff	KY	Dent	RY	11	00							15.			1		1	1	T
1.1.8	CSX	CSX	Dent	RY	Blackey	KY	8	-			0.0		52	0	111	1 974	10				1	
17.3	CSX	CSX	Blackey	KY	Quo	KY	2	0.0			3 0.0	4.0	43	01								T
280	CSX	CSX	Duo	KY	Pat	KY	10	0.0			3 00		-	0.1				1	-	+	+	4
2.781	CSX	CSX	Pat	RY	Deane	KY	6	20	4			44						-	-	-	-	-
1.182	CSX	CSX	B.C.C.Jct	KA.	Deam	KY	22	00			00 .00			01	121			+	+	-	-	+
0.785	CSX	CSX	Porter Jct	KY.	BCCJet	KY								0			0 04 5 0%	+	+	+	-	+
5-294	CSX	CSX	Stevens Branch	. KY	Porter Jct	KY	12	00			00	7.						-	+	+	+	÷
0.085	CSX	CSX	Martin	KY	Stevens Branc		5			5 78	0.0	74						+	-	-	+	+
0.000	CSX	CSX	Beaver Jct	KY KY	Martin Amchorage	KY	86		-	-				2	310			1	-	-	1	1
C.U.M.	CSX	CSX	Latonia Anchorage	KY	Louisville	KY					0.0	18:						1	1			T
2,280	CSX	CSX	Louisville	KY	Amqui	TN		0.0	181		3 00	17.		1.	4 35	4 32						1
6-294	CSX	CSX.	Cincinnati	OF	Covington	KY		03	35	9 36.6	1 0 9	338			3 75.1	8 81.0	2 34					
	CSX	CSX	Covington	KY.	Latonia	KY		01	30		3 0.0	28 9		-1	4 57 1					-		
	CSX	CSX	Latonia	KY	Winchester	KY	93				00	16.0						-	-	+	-	4
	CSX	CSX	Winchester	KI	Sinks	KY.					0 0 0	23.		-1				-			-	4
C 294	CSX	CSX	Sinks	KY.	Carbin	15.1	35			9 22 9 3 27 5	9 00	216	5 216				1 23	1	+	+	+	-
	CSX	1 CSX	Corbin	KY	Cartersville	GA					3 00	26.	1 26.1		2 63			+	-	+	-	+
C pier	CSX	CSX	Cartersville	GA	Atlanta	GA		01	39		4 00	38						+	+	-	+	+
	CSX	CSX	Atianta	GA	Manchester	GA			0 193	2 192 9 27.9	2 00	26		1				+	-	+	-	1
C.24	CSX	CSX	Manchester	GA RY	Heidrick	GA				2 83	2 01	201	2 92	0	0 201	6 57 1 2 20 1	2 04	+	+	1	-	1
	CSX	CSX.	Eorbin Heidrick	KY KY	and the second se	KY						91		0				1	-	1	1-	T
	CSX DSX	CSX		KY KY	Elys	KY						90						1	-	1	1	T
	CSX	C5x	Elys Yingling	KY	Yingking Pineville	KY	4	01						0	0 191			1		1	1	T
	LISK	CSX	Pineville	KY	Harbell	KY		01	5		8 01		8 58	0	0 12	7 127						
100 0004	CSX	CSX	Hartwill	KY.	Ponza	KY		01	5	5 58	5 0.8	5.5	5 5.5	0	0 12	1 12	1 09	6				
	CSX	CSX	Ponza	KY	Crosby	KY			5			5.8	5 5.5			1 12		9				

Q is the density density of the product of the state of the state matrix Q is the density of the state o

Rail Line Segments and Traffic Density Changes

			an-see of these	112	7		10 111			P	SSENG	ERAF	REIGHT	TRAIN	DATA			T	HRE	SHOL	DM	ET
	OWNE	RSHIP							995 BASE		-		UISITION			A GROSS 1	ONS (1)	61.	E	16	3	332
	Unite	Ronie	SEG	MENT DE	SCRIPTION	_				-				-		1		-	-		-	-
SEG ID	PHE	POST	BETWE	EN	AND		SEG LENGTH (mi.)	PSGR THN	FRT	TOTAL	PSGR	FRT	TOTAL	Δ	1995 BASE	POST	Δ	AIR	NOISE	PSOR TRN		HAZMAT
0.306	CSX	CSX	Blackmont	8.7	Crosby	KY	4	0.0	55	55	0.0	55	5.5	00	.20	120	016			_		T
0.801	CSX	CSX	Blackmont	87	Baxter	KY KY	9	00	56	56	00	56	56	0.0	123	123	0%	-	-		-	÷
0.308	CSX	CSX	Baxter	KY	Harlan	KY	2	00	57	57	0.0	57	57	0.0	12.9	12.9	0%		-			T
5.010	CSX	CSX	Dressen	KA.	Hartan	KY	1	0.0	4.4	4.4	0.0	44	44	0.0	97	97	01-		-			-
116.5	CSX	CSX CSX	Dressen	KY KY	Gilden	KY.	5	00	44	44	00	44	44	00	94	94	0%	-				÷
0.313	CSX	CSX	Gildden Papeville	KY	KV-VA State L	XY.	7	00	40	40	0.0	40	40	0.0	87	87	094	-	-	-	-	t
- 918	CSX	CSX	KY-VA State Lin		Hagans	VA	3	00	40	40	0.0	4.0	40	DO	87	87	0%					T
0.015	CSX	CSX	Hagans	WA.	Pennington	VA	16	00	40	40	0.0	40	4.0	00	8.7	87	0%	-			_	+
0.5%	CSX	CSX	Louisville	WA KY	Big Stone Gap Long Branch	VA KY	16	00	43	43	00	43	4.3	-02	94	94	4%			-	-	ł
0.316	CSX	CSX	Long Branch	KY KY	Skillman	KY.	49	00	43	43	0.0	40	40	03	91	96	51			-		t
0.67	CSX	CSX	Skillman	KY.	Henderson	KY	60	00	43	43	0.0	40	40	-03	7.0	71	196					I
0.425	CSX	CSX	Big Sandy Jos	KY	Elkhom City	Kr	127	0.0	18.8	18.8	00	18.8	18.8	0.0	43 1	44 0	2%		-		-	÷
0.321	CSX CSX	CSX	Elikhom City Frisco	TN	Frisco Bostic	INC	89	00	19.3	193	0.0	193	193	00	30.6	32.8	- 9%			-	-	t
2-323	CSX	CSX	Boshc	NC	Spartanburg	SC	32	0.0	13.8	13.8	00	13 8	13.B	0.0	27.9	30.5	9%					T
- 3:24	CSX	CSX.	Laurens	SG	Spartanburg	SC	38	00	136	13.6	0.0	12.8	12.8	-0.8	273	22.7	-17%					Į.
C-325	CSX	CSX CSX	Clinton	SC	Laurens	56	11 63	0.0	64 104	64 10.4	00	10.4	64 104	00	67	67	0%	-	-		-	÷
0-325	CSX CSX	CSX	Columbia Eastover Jct	SC	Clinton	SC	27	00	43	43	0.0	43	43	0.0	6.9	69	0%	-	-		-	t
6.328	CSX	CSX	Sumter	SC	Eastover Jitt	SC	19	00	39	39	00	39	3.9	0.0	48	48	0%					T
N72	CSX	CSX	Sumter	SC	Lane	SG	40	00	3.7	3.7	0.0	37	37	00	47	4.7	0%					1
C-350	CSX CSX	CSX CSX	Charlotte Monroe	NC	Bostic Charlotte	NC	24	0.0	76	76	0.0	76	76	00	15.3	16.9	10%	-			-	÷
C-882	CSX	CSX	Augusta	GA	Greenwood	SC	68	00	8.8	88	00	82	82	.06	17.6	173	2%	-			-	t
186.0	CSX	CSX	Greenwood	SC	Laurens	SC	28	0.0	10.5	10.5	0.0	3.8	98	-0.7	216	19.6	.9%)					1
2/334	CSX	CSX	Weldon	NC	Rocky Mt	NC	37	10.0	19.6	29.6	10.0	25.5	35.5	5.9	49.9	55.9	12%		_	×		Ļ
315	CSX	CSX	Rocky MI	NC NC	Contentnea Selma	NC	19	10.0	19.6	29.6	10.0	22.1	32 1 31 0	25	50 3	53.2	6%	-		X		÷
-1M- -157	CSX	CSX	Contentriea Selma	NC	Fayetteville	NC	49	6.0	20.4	26.4	6.0	216	27.6	12	44 8	45.0	0%	-	-	x	-	t
0.0398	CSX	CSX	Fayetteville	NC	Pembroke	NC	31	60	22.1	28 1	6.0	22.2	28.2	D 1	43.9	45.4	3%					1
3.15	CSA	CSX	Pembroke	NC	Dillon	SG	21	6.0	157	217	6.0	17.2	23.2	15	22.8	28.2	24%					I
5.342	CSX	CSX. CSX	Dillon Florence	SC	Florence	SC	31 49	6.0 6.0	15.6	21.6	6.0 6.0	19.0	25 0	34	337	34.6	3%		-	x	-	÷
5-347	CSX	CSX	Lane	SC SC	Lane St Stephen	SC	B	6.0	16.2	22.2	60	19.9	25.9	37	33.4	35.6	710	-	-	x	-	t
0.043	CSX	CSX	St Stephen	SC	Ashley Jct	SC	39	60	127	18 7	5.0	16.5	22.5	3.8	29.0	31.0	7%			ж.		1
344	CSX	CSX	Ashiey Jot	SC	Yemassee	SC	54	50	167	22.7	6.0	20.6	26.6	39	32.4	37.9	17%	-		*		1
C 345	CSX.	CSX	Yemassee Savannan	SC GA	Savannah Jesup	GA	47	60 80	12.2	18.2	60 80	16 1 22 8	22.1	39	27.1 46.6	32.7 50.6	21%	-	-	×		÷
0.342	CSX	CSX	Jesup	GA	Wavcross	GA	39	00	72	72	0.0	7 B	78	06	20.1	22 1	10%		-		-	t
0.048	CSX	CSX	Pembroke	NC	Wilmingtoo	NC	81	0.0	35	3.5	0.0	50	5.0	15	93	10.5	14%					T
0.048	CSX	CSX	Hamiel	NC	Pembroke	NG	34	0.0	118	118	00	131	13.1	13	31.6	32.0	1%		_			1
0.050	CSX	CSX CSX	Hamlet Montoe	NC	Canton	NC	53 92	00	20.4	20.4	00	23.0	23.0	26	41.5	43 1	41 291	-	-	-	-	÷
0.052	CSX	CSX	Clintan	SC	Greenwood	SC	28	00	17.1	17 1	00	19.6	19.6	25	283	30 1	796		-		-	t
c. 161	CSX	CSX	Greenwood	SC	Athens	GA	81	00	16.1	16.1	0.0	18.8	18.8	27	283	30.6	8%					T
6.354	CSX	CSX	Athens	GA	Atlanta	GA	69	0.0	18.7	18.7	0.0	210	21.0	23	32.9	37.5	14%				-	4
C-394	CSX	CSX CSX	Atlanta	GA	Montgomery	GA	100	0.0	153	15.3	0.0	16.5	16.5	-0.7	230	253	10%		-	-	-	÷
1.057	CSX	CSX	Lagrange Hamlet	NC	McBee	SC	50	2.0	34	5.4	2.0	33	53	-0.1	52	5.6	7%	-	-	-	-	t
5.038	CSX	CSX	McBea	SG	Columbia	SC	108	2.0	44	6.4	20	4.4	64	0.0	54	5.9	9%					1
0.054	CSX	CSX	Columbia	SC	Fairtax	SC	76	20	39	5.9	20	37	57	-0.2	4.3	4.5	3%	_		-	-	1
1960	CSX	CSX	Fairtax Hamlet	SC	Savannah	GA	62 42	20	12.4	14.4	2.0	116	13.6	-0.8	23.1	213	-8%	-	-		-	÷
5.962	CSX	CSX	Dillon	SC	Andrews	SC	74	00	43	43	00	42	42	-01	8.5	74	-13%				1	t
0.565	CSX	CSX	Andrews	SC	State Jct	SC	28	0.0	25	25	0.0	25	25	00	1.0	10	0%					I
264	CSX	CSX	State Jct Removal	SG	Remount	SC	.20 10	00	22	22	00	22	2.2	00	24	25	4% 0%	-			-	ŧ
2.065	CSX	CSX	Remount Camak	GA	Charleston Atlanta	GA	126	00	81		00	16	16	0.0	35	35	-10%		-	-	-	f
0.06*	CSX	CSX.	Augusta	GA	Camak	GA	48	00	71	7 1	00	6.7	67	-0.4	13.5	12.8	-5%					Ť
388	CSX	CSX	Robbins	SC	Augusta	GA.	.28	00	12.9	12.9	0.0	12.3	12.3	-0.6	20.5	233	12%					Į
163	CSX	CSX	Fairtax	SC	Robbins	SC	29	00	12.9	12.9	00	123	123	-0.6	26.3	23.3	-11%		-	-	-	Ļ
: 315 : 0.1 = 1	CSX	CSX	Yemassee Mckenzie	SC TN	Failfax Memphis	TN	31	00	5.0	50	0.0	12.4	50	23	65 194	50 210	-8%	-	-	-	-	÷
372	CSX	CSX	Nastiville	TN	Mckenzie	TN	117	00	94	94	00	117	117	23	210	25.4	21%	-			1	t
0.00	CSX	CSX	Nashville	TN	Stevenson	AL	113	00	20.6	20.8	0.0	21.1	21.1	0.5	40 1	416	4%					I
a în c	CSX	CSX	Stevenson	AL	Chattanooga	TN	39	0.0	19.6	19.6	0.0	17.5	17.5	-21	37.5	38.4	2%		-	-		Ļ
2.315	CSK	CSX	Chattanooga Lagrange	TN GA	Cartersville Parkwood	GA	87	0.0	177	177	00	17.4	17.4	-0.3	36.3 24.1	35.6 29.1	21%	-	-			ŧ
0.017	CSX	CSX	Manchester	GA	Lagrange	GA	45	00	12.0	12.0	00	116	116	-04	20.5	22.8	1196			-	-	t
0.078	CSX	CSX.	Waycross	GA	Thomasville	GA	105	0.0	80	8.0	0.0	7.6	7.6	-0.4	11.5	11.9	4%					I
0.0.0	CSK	CSX	Thomasville	GA	Metcalt	GA	11	0.0	0.4	0.4	00	04		00	01	01	0%		-			ļ
C-080 -	CSX	USX CSX	Thomasville	GA GA	Manifgomery Falkston	GA	210	00	79	79 183	00	82 124	62 204	17	10.6	10.5	0%		-	-		f
D-RU D-MG	CSX	CSX	Jacksonville	FL	Baldwin	FL	18	2.8	21.9	247	28	233		14	187	20.5	9%	-	-	x	-	f
C.MJ	CSX	CSX	Baldwin	FL	Chattahoochee		189	80	11.7	12.5	80	111	11.9	-0.6	23.8	207	-13%					T
0.184	CSX	CSX.	Chattahoochee	FL	Pensacola	FL	161	0.8	10.3	11.1	0.8	9.7	10.5	-0.6	17 B	15.6	-12%				-	Į.
0-145	CSX		Pensacola	FL	Flomaton	AL	.43	0.8	99	10.7	0.8	113	12.1	1.4	20.4	215	5%			× ×	1000	

) . Could a reduced prior q even use the threshold as the post of the post of the dense may be q .

Rail Line Segments and Traffic Density Changes

			EDWENT COUNT	4302			34/21				SSENG			TOAIN .				+	-			ET
	OWNE	RSHIP	SEGM	ENT DES	CRIPTION			1	995 BASI	E	P	OST ACC	UNSITION		MILLIO	N GROSS	TONS (1)	118	2	-	5	332
EG ID	PRE	POST ACQ	BETWEE	N	AND		SEG LENQTH (mi.)	PSQR	PRT	TOTAL	PSGR	FRT	TOTAL	Δ	1995 BASE	POST ACQ	Δ	AIR	NOISE	PSGR TRN	FRT TRN	HAZMAT
COAP .	CSX	CSX.	Mobile	AL	New Orleans	LA	143	0.8	20.6	214	0.8	22.7	23.5	21	23.4 64.6	34.6 66.0	48%	-	-	×	-	-
D(34R)	CSX	CSX	Waycross	GA	Folkston	GA	35	0.0	33 1 43 9	33 1	80	32.4	52.6	07	95.6	84 2	12%				1	t
5.M9.	CSX	CSX.	Folkston	GA. FL	Caliahan	EL.	21	00	177	177	0.0	18.3	183	06	44.4	510	1.5%					
1.000	CSX	CSX	Callahan	FL	Ba/dwin Starke	E.	26	20	227	247	20	23.3	253	0.6	47 D	52.0	119		1			
LMT.	CSX	CSX	Baldwin Starke	FL	Vitis	FI	126	20	19.3	213	2.0	193	213	0.0	38.8	40.1	39		1			
2 142	CSX	CSK	Villis	FL	Plant City	FL	19	00	9.5	96	0.0	96	96	0.0	263	25 B	2%					
2.254	CSX	CSX	Plant Dity	FL	Uceta Yard	FL	17	40	9.1	131	4.0	96	13.6	0.5	26.1	28.1	8			1		1
	CSX	CSX	Callahan	FL	Jacksonville	FL	16	8.0	23.5	315	8.0	23.2	312	03	47.1	45 B	-3%				-	4.
1.19	CSX	CSX	Jacksonville	FL.	Palatka	FL	54	6.8	83	15.1	6.8	83	15 1	0.0	216	21.1	-2%	1			-	1
10. 197	CSX	CSX	Palatka	FL	Sanford	FL	68	68	6.6	13.4	6.8	56	13.4	0.0	15.1	15.9	-1%	-	1	-	-	4
1.04	CSX	CSX	Sanford	FL	Aioma	FL	27	00	2.0	20	0.0	20	20	0.0	0.0	0.0	0%	-	1	-	-	4
2.149	CSX	CSX	Sanford	FL	Ortando	FL	22	48	80	128	48	8.0	12.8	0.0	140	12.9	-81	-	-	+	-	4
0.422	CSX	CSX	Orlando	FL	Aubumdale	FL	51	4.0	77	377	40	91	13.1	14	75	8.5	139	+	-	*	+	+
15 AD1	CSX	CSA	Aubumdale	FL	Laxeland	FL	12	40	72	11.2	4.0	8.6	126	14	19.5	23.4	20%	+	+	1÷	+	÷
2.473	CSX	CSK	Lakeland	FL.	Winston	FL	4	40	17.6		40	18.9	22.9	13	195	19.9	101	+	+	1 x	-	÷
C-405	CSX	CSX	Winston	FL	Plant City	FL	5	40	9.8	138	40	113	1/3	00	13.4		29	1	-	1	1	T
2.454	CSX.	CSK	Aubumdale	FL	Sebring	FL	47	60 60	11.3		6.0	156	218	0.0	110	112	24	1	1	1	1	T
0.405	CSX	CSX	Sebring	FL.	W Palm Bch Miami	FL	70	34 0	67		34.0	67	407	0.0	116	117	.19	6	1			T
5.474	CSX	CSX	W Palm Bch Balhmore	MD	Hanover	PA	55	00	34			34		00	52	5.6	7%	0				T
0.40	CSX	CSX	Handver	PA	Hagerstown	MD	57	00	16		20	1.6	16	0.0	1.6	16	09	6	1			T
0.408	CSX CSX	CSX	Harpers Ferry	W	Strasburg Jct	VA	51	0.0	09			0.9	03	0.0	17	1.7	09	6				1
5-410 C-415	CSX	CSX	Green Jitt	PA	Brownfield	PA	15	00	04			04	04	0.0	0.0	0.0	09	-	-	-	-	1
1-411	CSX	CSX	Rankin Jct	PA	Willow Grove	PA	11	20	17	37	20	17	37		32	32	01	1	1	1	+	4
D-492	CSX	CSX	Glenwood Jitt	PA	Tylerdale	PA	32	0.0	0.5		0.0	0.5	0.5	0.0	16	1.6	03	0	+	-	+	4
2.411	CSX	C.S.K.	Willow Grove	PA	New Castle	PA	56	00	10		0.0	10	10	0.0	0.6		10	-	-	-	-	4
0.814	CSX	CSX	Weilsboro	)N	N Judson	10	15	0.0	0.3		0.0	0.3	D3	0.0	04	10	01	-	+	+	+	÷
1418	CSX	CSX.	Pine Ja	iN-	Rock Island Jct		16	0.0	20		0.0	20	20	0.0	10	43	.353	+	+	+	+	÷
4.92	CSX	CSX	Dolton		75th Street	IL	8	0.0	4(		00	35		04		4.3	-307	-	+	-	+	÷
2.417	CSX	CSX	Blue Island Jiz	it.	Cleaning	IL.	15	00	17.0	17.0	00 00	17.4	17.4	04	4.9		11	+	+-	+	-	æ
2.4.16	CSX	CSX	Joliet	IL	Ottawa	0_	45	00	30	30	00	20	20	0.0	10	10	01	+	+	+	-	÷
2-819	CSX	CSX	Ottawa	11	Henry	14	44	0.0	1.0	20	00	19		00	24	2.4		1	1	+	+	
0.420	USX.	CSX	Grand Rapids	Mi	Balgwin	MI	13	00	1 71	20	0.0	20	20	00	23	23	01	1	+	+	+	1
5427	CSX	CSX.	Baldwin	MI	Walhalla	MI	1.4		16			1.6		00	11		01	1	1	1	1	T
	CSX	CSA.	Walhalla Walhalla	MI	Manistee	M	27	0.0	0	-		0.9	-	00	1.3	13	01	6				T
2.420	CSX	CSA	Waverly	MI	Grand Haven	MI	20	0.0	28			2.8		00	40	4.0	0					
	CSX	CSX	Grand Haven	MI	Muskegon	MI	13	00	1 1	1 1.7	00	17	17	0.0	1.6		121	6		1		
	CSX	CSX	Muskegori	MI	Berry	M	5	0.0	1 1	7 13	0.0	1.7	1.7	0.0	0.3	0.3		1			-	4
1.429	CSX	CSX	Berry	MI	Montague	MI	11	0.0	1		7 0.0	1.7		0.0	0		01	1	-	-	-	4
-428	CSX.	CSX	Berry	Mi	Fremont	M	20	0.0	0			06		0.0	0.2	02	09	4	+	+	+	-
1.14	CSA	CSX	Saginaw	M	Midlarid	( M)	20	00	4 (		0.0	4.0		0.0	12	1/2	01	-	+	-	-	-
0.4.0	LCSX.	CSX	Saginaw	M	Bay City	MI	17	0.0	2	-		24	· · · · · · · · · · · · · · · · · · ·	00	07	0.7	0	-	+	+	+	-
	CSM	CSX	Saginaw	M	Yale	MI	19		4		2 00	22	2 22	010	46			3	+	+	+	H
1.6	CSX	CSA	Port Huron	MI	Belle River	MI ON	4	0.0	2	2 21	2 08	22		00	04			-	+	+	+	1
	CSX	CSK	Fargo	ON	Bienheim	ON	1 7	00	1	2 1	2 0.0	1 10	1 12	0.0	0.4			-	1	1	1	1
-410	CSX.	CSX	Chatham Chatham	ON ON	Fargo Samia	ON	53		1		2 00	1.2		20	03					-		T
CAD.	CSX	CSX	Blenheim	ON	Willome	ON	28		1	2 1	2 0.0	12	2 12	0.0	0 0:			6				
CAP.	CSX	CSX	Cambridge	OH'	Newark	OH	52	0.0	1	_	-	10		00	0 0 1		0				1	
-416	ESX	CSX.	Newark	DH	Columbus	OH	35		1	6 1		1.6		0.0	1 1 1						1	
-4.54	CSX	CSX	Middletown Jct	OH	Middletown	OH	11		6	3 6	3 00	54		0.9						-	-	
	CSX	CSK	S Richmond	VA	Beilwood	VA	8		3		7 0.0	37	7 37	0.0	0 52	-			+	+	+	4
2.841	CSX	CSX	Bellwood	VA.	Hopewell	VA		00	2	9 2	9 0.0		9 29	01	0 44				-	+	+	4
12-442	CSK	CSX	Bellwood	VA	Centralia	VA	-	00	2	1 2	1 00		21	0	1.	2 12	0	-	+	-	+	
2.443	CSX	CSX	Weidon	NC	Roancke Rapi		5	20				0:		0.0	0 01				+	+	+	-
-144	CSX	CSX	Weldon	NC	Franklin	VA	41		7						3 80	0 68 2 66			+	+	+	
2445	CSX	CSX	Franklin	VA	Portsmouth	VA	37	10	3 7			68		0		2 22	0		+	+	+	
446	CSX	CSX	Rocky MI	NC	Parmele	NC	32		1 2	0 0		1 31	0 20	0	0 16	5 16			-	1	+	
2.417	CSA	CSX	Farmele	NC	Plymouth Elmer	NO	38			0 2	0 00		0 20	0					-	-	-	
-445	CSX	CSX	Parmele Contentnea	NC NC	Wallace	NO	69								0 2	50			-	-	1	
2-445	CSX.	CSX	Warsaw	NC	Moltonville	NO	10					1 1	3 13	0		3 13				-		
240	CSK	CSX	Fayetteville	NC	Fort Jct	NO	8	0.0	0 0					0	0 0.	4 0.4	1 0					
2412	CSX	CSX	Fayetteville	NC	Vander	NO	6		0 0	6 0	6 0.0	0.	6 06	0	0 03	3 0.3					1	
2.453	CSX	CSX	St Stephen	SC	Cross			0.0	3 .2	1 2	1 0.0	2	1 21	0					_			
214(4	CSX	CSX	Waycross	GA	Brunswick	GA		0.0	2 2	0 2	0 00	20	0 20	0						-	1	
4.0	CSX	CSX	Waycross.	GA	Pearson	GA	30	0.0	0 1	0 1	0 0.0	1 1)	0 1.0	0					-	-	-	
1.450	CSX	CSX CSX	Yulee	FL	Femandina Bo	h FL	. 12	00	0 2		5 00						8 0	1	-	-	-	
-461	CSX.	CSX	Jacksonville	FL	Seals	GA		00	0 8	0 8	0 00							-	+	-	-	
1.10	CSK	CSX	Vairico	FL	Yeoman Yard	FL	9		24					0						+	+	
1.405	CSX	CSX	Orangeburg	SC	Sumter	SC	44		0 1										+	+	+	
10.468	CSX	CSX	delton	SC	Greenville	SC	28	0.0	0 1										+	+	-	-
a6 *	CSX	CSX	Greenville	SC	Spartanburg	SC	34		0 1						0 1	2 12			-	-	-	
	CEX	CSX	Anderson	SG	Belton	100	12								0 0				-	+	+	
2.482	CSK	CSX	Durham	NC	Joyland	NC	22	00											+	-	-	
4/1-A	CSX	CSX	Apex	NC	Durham	NO		00	0 2			2 21				7 01		36	-	+	1	
2-468	CSX	CSX	Nonina Raleigh	NC:	Raleigh Hamlet	NO	97		0 8		2 21	3 8	2 102						1	-	-	
-408			In diaman	1944	A DESCRIPTION AND A	1000	1	1 6 1	- 0	100	0 00	3 1	- W &	0					-		-	100

. The state is also be a provide on the strength of the rest of the first of the state of the s

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Rail Line Segments and Traffic Density Changes

			H IWENT SOUNT	102	2		26 123			P	SSENG	ERAF	REIGHT	TRAIN	DATA			TT	HRE	SHO	DM	ET
	OWN	ERSHIP	SECO		SCRIPTION				1995 BAS	e		POST ACC	UISITION		MILLIC	N GROSS	TONS (1)	851	*	3	3	1
SEG ID	PRE	POST	BETWE		AND		SEG LENGTH (mi)	PSOR TRN	FRT	TOTAL	PSOR TRN	FRT	TOTAL	Δ	1995 BASE	POST	Δ	AIR	second -	SOR TRN	ANT TRA	
C 418	CSX	CSX	Mt Holly	T NC	Terrell	INC	24	00	12	12	0.0	12	12	0.0	16	16	0%	-	-	4	-	-
6.459	CSX	CSX	Montgomery	AL	Western Jct	AL	51	0.0	10	10	0.0	10	1.0	0.0	1.5	15	090					T
0.470	CSX	CSX	Camak	GA	Harliee	GA	56	0.0	28		0.0	2.8	28	00	55	.5.5	0%		1.5			I
0.472	CSX	CSX	Andrews	SC	Pennyroyal Jo	I SC	8	00	36	36	0.0	3.6	3.6	0.0	57	57	046		-		_	1
0.471	CSX	CSX	Pennyroyal Jct Dames Pt Jct	FL	N Shore Jct	SG.	8	0.0	12	12	00	12	12	00	31	31	0%	-	-	-	-	1
£ 474	CSX	CSX	Bainbridge	GA	Tallahassee	FI	43	0.0	20	20	00	20	20	00			0%	-	-	-	-	÷
0.415	CSX	CSX	Hilisdale	IN	Chrisman	In	16	0.0	18		0.0	21	21	03	22	40	8%	-	-	-	-	÷
0.418	CSX	CSX	Chrisman	.0.	Decatur	IL	69	0.0	18	18	0.0	.21	21	0.3	37	40	8%		-			t
0-417	CSX	CSX	Brentwood	TN	Columbia	AL	35	0.0	28	28	0.0	2.8	2.8	00	24	2.4	0%				-	t
G-476	CSX	CSX	Weilington	AL	Birmingham	AL	64	0.0	22	22	0.0	22	2.2		43	43	0%					Π
0.479	CSX	CSX	Bakers Siding	IN.	Chinook	IN.	11	0.0	20	20	00	20	2.0	0.0	1.4	1.4	0%					E
C-485	CSX CSX	CSX	Evansville	IN.	Adams	IN	9	00		37	0.0	37	3.7	00	63	63	D16	-		-	_	Ð
0.482	CSX	CSX	Adams Adams	014	Abee	IL IN	28	0.0	26	26	00	26	26	0.0	33	33	0%	-		-		4
-483	CSX	CSX	Carm	12	Venedy	114	89	0.0	0.6	06	0.0	0.8	0.8	0.0	0.5	0.5	0%	-	-	-	-	÷
0.484	CSX	CSX	Kronos	KY	Moorman	KY		0.0	12	12	00	12	12	00	20	20	0%	-	-	-	-	÷
C1485	CSX	CSX	Kronos	KY	Wilson Sta	KY	4	00	12	12	0.0	12	1.2	00	20	2.0	D'%	-	-	-	-	E
C 485	CSX	CSX	Moorman	KY	Drakesboro	KY	13	0.0	21	21	0.0	21	21	0.0	31	31	0%					Ľ
C-487	CSX	CSX	Mortan	KX	Atkinson	KY	5	00	5.8	58	0.0	58	58	0.0	12.8	12.8	0%					F
488	CSX	CSX	Alkinson	KY.	Providence	KY.	19	0.0	38	38	0.0	38	38		80	8.6	0%					ľ
485	CSX	CSX	Providence	KY .	Dotiki	KY.	5	0.0	26	26	00	2.6	2.6	00	25	25	034					f
764-C	CSX	CSX	Millport	KY.	Atkinson	KY	19	00	2.4	24	00	24	24	00	52	52	0%		-		_	Į.
492	CSX	CSX	Cómo Drakesboro	KY KY	Zeigler 9 (NW) Sinclair	XY XY	4	00	12	12	00	12	12	00	15	15	0%6	-	-		-	ŧ.
493	CSX	CSX	Dent	KY	Jim Hill	KY	6	00	14	09	00	09	0.9	00	19	41	0%	-	-	-	-	f
498	CSX	CSX	Black Crk	AL	Chetopa	AL	13	00	26	2.6	00	26	26	00	5.0	50	0%					ł
495	CSX	CSX	Mageila	AL	Bessemer	AL	10	0.0	32	3.2	0.0	32	32	0.0	21	21	0%			-	-	f
496	CSX	CSX	Attalia	AL	Guntersville	AL	30	0.0	0.4	04	0.0	0.4	0.4	0.0	1.4	14	0%					t
497	CSX	CSX	Attalia	AL	Wellington	AL	22	0.0	3.7	1.7	0.0	1.7	1.7	0.0	3.0	30	0%					t
498	CSX	CSX	Boyles	AL	Blue Crk Jct	AL	15	0.0	4.7	4.7	0.0	47	47	0.0	5.8	58	0%				1	E
499	CSX	CSX	Blue Crk Jct	AL	Valley Crk	AL	8	QQ	4.4	4.4	0.0	4.4	4.4	0.0	9.6	96	Q%					l
600	CSX	CSX	Boyles	AL	Mt Pinson	AL	10	0.0	0.9	0.9	0.0	0.9	0.9	0.0	02	02	0%	-	-			1
507	CSX	CSX	Selma Selma	AL	Western Jct	AL	3	0.0	16	16	0.0	16	16	0.0	1.5	15	0%	-			1	į,
507	CSX	CSX	Montgomery	AL	Myrtlewood	AL	61 12	00	16	16	0.0	16	16	00	12	12	0%				-	į,
804	CSX	CSX	Calhoun	TN	Autauga Crk Patty	TN	12	0.0	10	10	0.0	10	04	0.0	07	13	0%	-				ł
805	CSX	CSX	Dossett	TN	Hamman	TN	24	80	05	05	00	05	0.5	00	07	07	0%	-				ł
506	CSX	CSX	Etowah	TN	Blue Ridge	GA	61	0.0	12	12	0.0	12	12	0.0	14	14	0%					h
-501	CSX	CSX	Worthville	KY	Warsaw	KY.	20	0.0	24	2.4	0.0	24	24	00	10	10	0%			-		t
.608	CSX	CSX	Lousvile	KCY	Medora	KY.	10	0.0	21	21	0.0	21	21	00	91	91	0%					E
809	CSX	CSX	Louisville	KY	Watson	IN	7	0.0	16	16	0.0	16	16	0.0	1.8	1.8	0%					Ľ
-610	CSX	CSX	Mokerizie	TN	Dresden	TN	16	00	16	15	0.0	16	16	00	0.6	0.6	0%					
811	CSX	CSX	Park City	KY	Glasgow	KY	10	0.0	0.6	0.6	0.0	0.6	06	0.0	0.4	0.4	01%					
411	CSX	CSX	Rockman Stilesboro Jct	GA GA	Stilesboro Jct Stilesboro	GA	22	00	12	12	00	12	12	0.0	3.0	30	0%	-		-	-	1
514	CSX	CSX	Monon	IN	Monticello	IN	10	00	02	40	0.0	40	40	00	113	00	0%5	-	-	-		H
513	CSX	CSX	Monon	IN	Medaryville	IN	15	00	02	04	00	04	0.4	00	0.6	0.0	0%	-	-	-	-	H
415.	CSX	CSX.	Greencastie	IN	Bloomington	IN	24	00	0.6	0.6	0.0	0.6	0.6	0.0	01	0.1	0%	-		-	-	ł
6.62	CSX	CSX	Mitchell	IN.	Louisville	KY	67	0.0	78	7.8	00	40	40	3.8	85	31	-63%			-	-	h
518	CSX	CSX	Long Branch	KY	Doe Run	KY	1.	0.0	4.0	4.0	0.0	40	40	0.0	07	0.7	0%	-				ľ
519	CSX	CSX	Twenty First St	WV	Hampshire	WV	-11	0.0	34	34	0.0	3.4	34	0.0	10	10	035			-		ſ
520	CSX	CSX	Hampshire	WV	MD-WV State L	WV	-29	0.0	34	34	00	34	3.4	0.0	47	4.7	094					1
523	CSX.	CSX CSX	MD-WV State Lin	WW MAY	Bayard	WV	33	00	34	34	00	34	34	0.0	47	47	0%6	-		_		í
522	CSX		Bayand MR Jot	WV	Henry Kingwood	WV	6 18	0.0	12	12	0.0	12	12	0.0	17	17	0%	-		-	-	į.
Qie I	CSX	CSX	Grafton	WV	WD Towar	WV	27	00	16	16	00	3.5	3.5	1.9	48	76	0% 59%	-	-	-	-	f
125	CSX		W Marietta	OH	Relief	OH	27	0.0	18	1.8	0.0	1.8	1.8	0.0	2.2	22	0%			-	-	F
5.06	CSX		Beipre	OH	W Manetta	OH	12	0.0	18	18	0.0	1.8	1.8	0.0	24	2.4	0%	-	-	-		f
112	CSX		Belpre	DH	Parkersburg	OH.	1	0.0	3.0	3.0	00	30	3.0	0.0	31	31	O <sup>e</sup> fe			-		Í
28	CSX	CSX	Berkeley Jct	WW	Berryburg Jct	WV	11	00	72	7.2	0.0	72	72	0.0	13.5	13.5	0%					ĺ
135	CSX	CSX	Berryburg Jet	WV	Tygart Jct	WV	11	0.0		72	00	7.2	7.2	0.0	10.6	10.6	0%				-	ĺ
00	CSX	CSX	Tygart Jct	WW	Century Jct	WV	4	00	62	62	00	52	62	0.0	10.6	10.6	0%					ĺ
933 972 -	CSX	CSX CSX	Century Jct Buckhannon	WV WV	Buckhannon Hampton lict	WV	13	00	56	56	00	56	56	0.0	97	97	096	-	-	-		ļ
14	CSX		Hampton Jot	WV	Hampton Jct Burnsville Jct	WV	6 31	00	56	56	00	56	56	0.0	93	93	0%	-	-	-	-	ļ
104	CSX		Burnsville Jot	WV	WN Tower	WV	42	00	54	54	00	54	56	00	87	87	0%	-	-	-		ļ
35.	CSX		WN Tower	WV	Allingdale	WV	11	0.0	06	0.6	00	0.6	0.6	00	02	02	0%	-	-	-	-	h
ac.	CSK		Tygan Jot	WV	Norton	WV	22	00	0.6	0.6	00	0.6	06	00	01	01	Dis	-	-	-	-	h
91	CSA	CSX.	Norton		Elkins	WV	8	00	01	0.1	00	01	01	00	00	00	096	-			-	ŀ
38	CSX		Burnsville Jót	WV	Gimer	WV	5	0.0	04	0.4	0.0	0.4	0.4	0.0	0.0	00	0%	-	-	-	-	f
199.	CSX		Hampton Jct	WV	IC Jat	WV	6	0.0	04	0.4	00	0.4	0.4	0.0	0.6	0.6	0%				-	Í
540	CSX	CSX	C Jet		Alexander	WV	10	0.0	04	04	00	04	0.4	00	06	0.6	0%		+	-	-	f
941	CSX	CSX	Berryburg Jct	WV	Sentinal	WV	13	00	06	0.6	0.0	06	0.6	0.0	2.9	2.9	D*6		1		1	ĺ
5.8.7	CSX		Century Jci	W	Century	WV	5	0.0	01	01	0.0	0.1	0.1	00	00	0.0	0%		1			ĺ
54.Y	CSX		NN Tower	WV	Donaldson W	WV	3	0.0	02	02	00	0.2	02	0.0	0.2	0.2	090			1		ĺ
948	CSX		Donaldson W		Beckley No.1	WV	19	00	01	01	00	01	0.1	0.0	01	01	046					ſ
46	CSX		St Albans		Sproul	WV	15	00	16.0	16.0	00	16.0	16.0	0.0	53 0	53.0	0%	-			_	ĺ
127	CSX		Andison	WV	Madison Diothier	W	22	00	96	96	00	96	96 30	00	33.2	33.2	0%		-		-	
148			liothier		Sharples	WV	3	0.0	26	26	00	26	26	00	102	10.2	0%	-	-	-	-	

 $\omega_{1}$  consider a relative program we have the threshold of the body determined there are been as the transmission of transmission of the transmission of the transmission of transmissi

#### Rail Line Segments and Traffic Density Changes

### ATTACHMENT ES-B MASTER TABLE OF ALL RAIL LINE SEGMENTS

		-	SEGMENT COUNT	102		1	38.121			PA	SSENG	ERSF	REIGHT	TRAIN	DATA			+	HRE	SHO	DM	-
	OWNE	RSHIP	erom	ALT DEC	CRINTION			4	995 BASI		F	INT AC	DUISITICIN		MILLIO	N GROSS	TONS (1)	119	11	8	2	332
			SEGME	ENTDES	CRIPTION															5	z	-
EG ID	PRÉ ACQ	POST ACQ	BETWEE	N	AND		SEG LENGTH [mi]	PSOR TRN	FOT TRN	TOTAL	PSGR	ERT TRN	TOTAL	Δ	1995 BASE	ACQ	Δ	AIH	NOISE	PSGR TRA	FRI TRN	TAMZAH
0.845	CSX	CSA	Sharples	WV	Mancio	WV	1	0.0	26	2.6	0.0	2.6	26	00	90 213	30 213	0%	-	-	-	-	-
5-808	CSX	CSX	Barboursville	WV	Logan	WV WV	55	00	66	60	0.0	66	66	0.0	13.4	13.4	Qal					T
2.882* 1	CSX CSX	CSX	Logan Stollings	WV WV	Stollings Rum Jct	WV	3	0.0	42	42	0.0	42	42	0.0	13.4		016		-	1		1
C - 161 -	CSX	CSX	Rum Jct	WV	Gilbert Yard	WV	21	00	30	3.0	0.0	30	3.0	0.0	78	7.8	011	-	-	-	-	+
0.854	CSX	CSX	Meadow Crk	WW.	Ramelle Jct	WV	20	0.0	13	13	00	13		00	31		0%	+	+	-	-	+-
2-588	CSX	CSX	Ramelle Jcl	WV	Swiss Jct	WV	47	00	09		00	0.9		00	03	03	0%	1	1	-	1	t
Dala.	CSX	CSX	Ramelle Jct Greenbrir E J	WV WV	Clearco Peaser Jct	WV	24	0.0	0.5		0.0	0.5	0.5	00	0.5	0.5						1
1.55	CSX	CSX	Pelaser Jct	WV	Lee	WV	1	00	05	05	0.0	.0.6	05		05	0.5	09	-	-	-	-	1
C 150	CSX	CSX	Pence	ww	Gien Daniels Jo	WV	27	00	25	2.5	0.0	2.5	35	0.0	48	46	0%	+-	+	-	-	+
1-861	CSX	CSA	Raieign	WW	Stone Coal Jet	WW	20	0.0	01	31 01	00	01	01	00	0.0	DO	QN	1	+	-	-	t
1.001	CSX	CSX	Beckley Jct	WV	Granberry Maple Meadow	WV	6	00	25	25	00	25		0.0	20	20	OTH	1	1			T
1.561	CSX	CSX	Gien Daniels Jct Gauley B/	WV	Rich Crk Jct	WV	7	00	0.1		00	0.1		0.0	D1	01	0%	-			-	1
1 554	CSX	CSX	Madison	WV	Harris	WV	30	00	6.4	6.4		6.4		60	173	173	09	1	+	-	+	4
1.80	CSX	CSX	Van Jot	WW	Robin Hood	WV	8	0.0	0.6		0.0	00		00	16	16	0%	+	-	+	-	÷
2.448	CSX	CSX	Robinson Crk Jcl	WV	Holprook	WV	2	00	06		00	64		00	18.9		0%	1	+	1	1	t
1.467	CSX	CSX	Sproul Elk Run Jot	WV	Elk Run Jot Jarrolds Vall	WV	34	00	19		00	18	19	00	4.9		D					T
1.589	CSX	CSX	Seth	WV	Prenter No 5	w	10	0.0	1.2	1.2	0.0	17	1.2	0.0	28		01	-	-	-	-	4
5.34	CSX	CSX	Jarrolds Vail	WV	Pettus	WV	1	0.0	1.5	1.9	00	15	1.9	00	49		0%	+	-	-	+	+
CAH.	CSX	CSX	Pettus	WV	Marfork	WV	2	0.0	14		00	14		00	33		01	+	+	+	-	+
17.47I	CSX	CSK	Pettus	WW	Sundial Elk-Crk No 1	WV	8	00	06		00	33		00	26		DY	1	1	1	1	T
-415	CSK	CSX	Wylo Man	WW	Buffalo Mine	WV	16	00	19		0.0	1.5	19	00	59	59	09	1	1			T
mars.	CSX	CSX	Snap Crk Jet	WW.	Don	WV	3	0.0	0.1	.01	00	0			0 01		01	+	-	-	-	+
	CSX	CSX	Rum Jct	WV	Macgregor	WW	6	0.0	0.3		00	0.		0.0	19	19	0%	+	+	+	+	+
	CSX	CSX	Stallings	WV	Band Mill Jet	WV	1	00	01		0.0	0		00	00	00	01	+	+	+	+	t
2.478	CSX	CSX	Band Mill Jct	wv	Meiville Trace Jct	WV	1 7	00	18		0.0	11							1			T
12 62Y	CSX	CSX	Monitor JCI	WV	Omar	WV	8	00	14		00	1.			35		C.a	5			-	T
- 141	CSX	GSA	Logan	WV	Hobet No 7	ww/	6	0.0	1.4		0.0	14			38			-	-	-	-	+
0.162	CSX	CSX	Levisa Jci	KY	Stones Branch	KY	1	00	0.		00	0	3 03	0.0	1 1 1			+	-	+	+	÷
C.565	CSX	CSX	Rum Jct	WV	Island Crk No 2		8	00	03		0.0	0		00	0 17		21	+	+	+	+	t
C-884	CSX	CSX CSX	Glade Crk Jct Dawkins	- WV	Caren Skyline	WV KY	35	00	01	1 01	0.0	10		01	0.9		0	1				T
C-886	CSX	CSX	Shelby Jct	KY	Myra 1	KY	15	0.0	11		00	1.							-	-	-	1
D.rik*	CSX	CSX	Coairun	KY	Burke Station	KY	31	0.0			00	31						-	+	+	+	+
5.181	CSX	CSX	Pennington	VA.	Stichartes	I VA	5	0.0	01			0		01		12	0	+	+	+	+	÷
C 188	C5X	CSX	St Charles	VA VA	St Charles	VA VA	1	00			00	0		0			01	1	+	+	-	T
	CSX	CSX	Paskert	KY KY	Gatiff	KY	18				00	1	01 10	0		2 22	01					1
1.881 1.92	CSX	CSX	Savoy Heidnek	KY	Horse Crk Jct	KY	22	0.0	0.		00000	0	2 02	0			61		-	-	-	4
2 (04.)	CSX	CSX.	Paskert	VA.	Mayflower	VA	2	0.0				D		0				-	+-	+	+	+
: S14	CSX.	CSX	Harbell	Ka	Middlesboro	KX	10				00	0 0		0		07	03	1	+-	+	+	Ť
÷ 91	CSX	CSX	Cato	8Y	Popeville	KY	1 7	00	0					0		0 00		+	1	+	+	t
5 194	CSX	CSX	Cato Middlesboro	KY KY	Stony Fork Jct		3	00			00			0	0 0	7 07	01	6				T
1.04	CSX	CSX	Stony Fork Jct	KY	Burley	KY	3	0.0			0.0			0		7 07	0		-		+-	4
1 100	CSX	GSX	Gludden	KY	Greech	KY	2	0.0	0		0.0	0 0		0	0 08		0		+	-	+	4
2.402	CSX	CSX	Straight Crk	KY.	Clover	KY	21	00	3	- the second second		-	_	0	0 23				+	+	+	÷
	CSX	CSX	Straight Crk	KY KY	Wen-Lar	KY	1 7	00	1		2 0 0	T		0	0 23				1	1		T
1.453	CSX	CSX	Неувит Туро	H.Y.	Wahoo	KY	1 3	DO	0			0 0	4 04	0	0 01		3 0	1				
T wild	CSX	CSX	Jeff	KY	Kenmont	KY	1	00	1 1	-		1 1	-		0 33	2 32	0	-	-	+	+	4
	CSX	CSX	Blackey	KY.	Hot Spot	KY	1	00				0 0						+	+	+	-	+
2,60	CSX	CSX	Jeff	KY	Vicea	KY KY	6	00					2 22	0					+	+	+	t
1001	CSX	CSX	Pat Baxter	KY KY	Sapphire Cloverlick Jct	KY	21			3 3		3					0		1	1		
509.0	CSK	CSX	Cloverlick Jct	KY	Lynch 3	KY	1		3	1 3	1 01	3	1 31	0	0 6	1 51						
1.410	CSX	CSX		KY.	Farkdale	RY					2 00	1			0 21				-	+	+	4
2.811	CSX	CSX	Parkdale	KY	Palisbury	KY						0 0	9 09	0	0 21	0 20	0 0		+	-+	+	-
0.612	CSX	CSX	Pulisbury	KY	Highsplint	KY	12				3 01	0 0		0	0 01	6 00	5 0		+	+	+	1
0.4712	CSX	CSX CSX	Highsplift Buffer	KY KY	Glenbrook Blue Grass 4	KY		0			2 01	0 0	2 02	0			5 0		1		1	
12月14 12月15	CSX		Dressen	KY.	Guiston	KY		00	0 0	0 0	0 00	0 0	0 0.0	0 0	0 0	1 01	1 0	1			-	
C.ete	CSX	CSX	Guiston	KY	Bardo	KY	2	0.	0 0	0 0	0 0	0 0	0 00	0 1					-	+	+	-
に書き	CSX		N Hazard	KY	Duane	KY			0 2	7 2	0 0	0 0 2 0	7 27	0 0					+	+	+	-
5.818	CSX			KY.	Kenvir 3	FL	4		0 0	0 0 0	9 01	0 0	9 29	0 0	0 0				-	+	+	-
C 619	CSX CSX	CSX	High Springs Starke	FL	Newberry	FL	40							0			5 15		1	1	T	
C-801	CSK			FL	Dunnellon	FL					9 0	0 3	5 38	5 0	6 5	3 63	3 19		-	-	1	
0.402	CSX	CSX.	Dumellan	FL	Red Level Jct	FL	10	01	0 2		9 0								+	+	+	
	CSX	CSX	Vitis	FL	Lakeland	FL	15		0 16			0 16							-		+	
CALL	CSX			FL	Eaton Park	FL	1	0	0 0	2 0	2 0	0 0	2 02	2 0							+	-
Class.	CSX		Bartow	FL	Bowling Greet Gainesville	FL			0 3			0 3	4 30						-	-	-	1
C-828	CSA		Burrietts Lake Clearwater	FL	St Petersburg	FL	1 1	5 01	0 0	6 0	6 0	0 0	5 05	51 0	0 0	3 0.	3 0	10				
D-404				FL	Кецка	FL	1	1 01	0 0	9 0			9 01	9 10					1	-	+	1
C.429				FL	Mulberry	FL	12	2 01	8 10	9 8	9 0	8 10	9 81	3 0	0 15	3 15:	3 0	-	-	-	1	1

12597

Rail Line Segments and Traffic Density Changes

			SEGMENT COUNT	112	2		10.753			P	ASSENG	ER & F	REIGHT	TRAIN	DATA			T	HRE	SHOL	DM	ET
	OWN	ERSHIP							995 BASI	E		OST ACT	UISITION		MILLIO	N GROSS	TONS (1)	119	12	16	7	132
			SEGM	MENT DE	SCRIPTION			-										-		-	-	-
EG ID	PRE	POST	BETWE	EN	AND		SECI LENGTH (mi )	PSGR	FRT	TOTAL	PSGR TRN	FRT TRN	TOTAL	Δ	1995 BASE	POST	Δ	AIR	NOISE	PSOR TRN	FRT TRN	HAZMAT
5.697	CSX	CSX	Achan	FL	Mulberry	FL	6	0.0	24 0	24.0	0.0	24-0	24.0	00	94 57	9.4 5.7	DR					T
0.601	CSX	CSX	Achan	FL	Green Bay	FL	4	0.0	180	100	0.0	180	18 D 8 O	00	13.7	137	0%		-			
£60	CSX	CSX	Green Bay	TL	Noralyn	FL	1	0.0	30	10	0.0		3.0	DO	4.0	40	0%		-		-	t
C.834	CSX	CSX.	Agricola	FL.	Green Hay	FL	4	0.0	6.0	6.0	0.0	6.0	6.0		9.9	. 99						
0.639	CSX	CSX	Yeoman Yard	FL	Sutton	FL	5	0.0	25.9	25.9	0.0	25.9	25.9	0.0	375	37.5	0%			_		
6.98	CSX	CSX	Sutton	#L	Big Bend Jos	FL	8	0.0	27.1	27.1	00	27.1	27.1	DQ	182	182	10% 0%	-	-	-	-	-
1 887 5 858	CSX	CSX	Big Bend Jct Weicome Jct	FL	Piant City	FL.	28	0.0	10.9	10.9	0.0	28	10.9		33	33	0%	-	-		-	ł
1.639	CSX	CSX	Edison Jat	TL	Welcome Jct	FL	2	0.0	10.9	10.9	0.0	10.9	10.9	00	34.6	34.6	Del					t
2.842	CSX	CSX	Edison /ct	FL	Mulberry	EL	5	00	240	24.0	0.0	24.0	24.0		19.4		.0%					1
2.641	CSX	CSX	Alert	FL	Bartow	EL	5	0.0	9.3	93	0.0	93	93	0.0	4.6	46	016					
0.642	CSX	CSX	Edison Jtl	FL	Brewster	FL	11	00	120	12.0	00	12.0	12 0	00	25.4		0%	-	-		-	÷
2.041	CSX	CSX CSX	Brewster Agrock	FL	Four Comers	PL D	12	0.0	12.0	12.0	0.0	12 0	120	00	3.7	37	0%	-		-	-	÷
2 2.45	CSX	CSX.	Agrock	FL	Arcadia	FL	35	0.0	0.6	06	0.0	0.6	0.6	0.0	0.7	27	0%				-	t
2.646	CSX.	CSX	Brewster	FL	Lonesome	FL	12	0.0		10	0.0	1.0	1.0		19	1.9						E
5.647	CSX	CSX	Bradley Jet	FL	Pierce	FL.	6	0.0	120	12.0	0.0	12.0	12.0	0.0	32	32	0%				-	1
5.648	CSX	CSX	Achan	FL	Pierce	FL	5	0.0	15	15	00	15	15	0.0	34	34	10% 0%	-	-			+
C-849	CSX	CSX	Alen Bradley Jiel	FL	Agricola	FL	- 6	00	4.0	12.0	0.0	12.0	12 0	00	13.1	13 1	0%	-			-	f
C 851	CSX.	CSX	Agricola	FL	Rockland Jct	FL	B	00	4.0	4.0	0.0	4.0	40	0.0	55	5.5	0%		-			f
C-052)	CSX.	CSX.	Hialean	FL	Homestead	FL	30	0.0	0.8	0.8	0.0	DB	0.8		13	13	0%					ſ
2-853	CSX	CSX	Gary	FL.	Supriur Sprgs	FL	5	0.0	82	8.2	0.0	82	8.2	0.0	62	6.2	01L		-		_	f.
C-654	CSX.	CSX	Sulphur Sprgs	FL	Clearwater	FL	26	0.0	22	22	00	22	2.2	00	12	12	0%	-	-		-	8
C-866	CSX	CSX	Welcome Jict Sulphur Sprgs	FL FL	Rock	FL	12	0.0	20.4	20.4	0.0	20.4	12	00	22	22	0%	-	-	-	-	÷
0-657	CR	CSX	Columbus	OH	Hocking	OH	1	30	13.4	13.4	0.0	95	9.5	-39	29.0	117	60%			-		t
5-858	CR:	CSX	Galion	OH	Columbus	QH.	58	00	13.4	13.4	0.0	7.5	7.5	-5.9	28.6	11.8	-59%					Ε
D-M9	CR.	CSX	Crestine	OH	Galion	OH	3	0.0	28.3	28.3	0.0	26.5	26.5	:18	86.7	52.1	:22%)			_	-	
0.480	CR	CSX CSX	Galion	OH	Marion	OH	23	0.0	186	18.6	00	236	236	50	39.0	415	B%					4
C 681	CR	CSX CSX	Ridgeway Sidney	OH	Sidney So Anderson	OH IN	38 86	0.0	24.2	24.2 29.4	00	310 267	31 0 26 7	68	51 4	40 0	B%	-		-	-	÷
Cases	CR	CSX	Sa Anderson	(NL	Indianapolis	IN	35	0.0	32.0	32.0	00	25.7	25.7	63	62.7	413	34%	-	-		-	E
1.854	CR	CSX	Indianapolis	114	Avon	IN	13	00	26.0	26.0	0.0	217	.21.7	-43	615	38.3	-38%					E
5-865	CR	CSX	Avon	JN.	Greencastle	IN	28	0.0	23.0	23.0	0.0	19.9	19.9	-3.1	51.6	41.8	-19%					E
0.685	CR	CSX	Greencastle	154	Terre Haute	101	32	0.0	26.4	26.4	0.0	19.9	19.9	-8.5	523	418	-20%	-	-			1
0.067	CR	CSX	Terte Haute Effingham	IN	Effingham St Elmo	IL.	59 14	0.0	23.8 22.3	23 B 22 3	0.0	16 1	16.1	-7.7	49.5	27.6	-35%	-	-		-	÷
- 64U	CR	CSX	StEimo	1L	E St Louis	IL	B3	0.0	16.0	16.0	0.0	91	91	-6.9	315	12.5	-60%			-		t
0.670	CR .	CSX	Terre Haute	IN.	Pans	IL.	22	0.0	1.6	10	0.0	1.7	17	0.1	1.7	0.4	.75%				-	t
5.621	CR	CSX	Pans	(L	Chrisman	IL.	11.	0.0	16	1.6	0.0	0.0	0.0	-1.6	1.0	0.0	-1009		1			
0.6.0	GR	CSX	Chrisman	IL	Danville	IL.	25	0.0	16	1.6	0.0	0.0	0.0	-1.6	1.0	0.0	-100%				-	
C-6/1	CR	CSX CSX	Induanapolis	IL	Kraft	IN	11	0.0	18	18	0.0	18	18	0.0	9.0	0.5	0%	-	-	2		÷
0.615	CR	CSX-	Kniff	IN	Avon	IN	5	14	9.6	110	14	116	130	20	90	9.0	10%	-	-	x	-	-
C.875	CR	CSX	Avon	IN.	Clemion	IN	4	1.4	8.8	10.2	1.4	89	10.3	01	12 3	13.1	6%					t
2417	CR	CSX	Carmont	(N)	Grawfordsville	IN-	34	1.4	7.4	8.8	7.4	75	8.9		11.8		196		-			
2.678	CR	CSX	Clemion	(N)	Frankfort	111	37	0.0	1.4	1.4	00	1.4	14	0.0	0.5	0.5	0%					
0479.1	CR	CSX CSX	Shelbyville	IN OH	Indianapolis	OH	28	00	16	16	00	16	15	100	04	04	0%	-				į.
C 680 C 881	CR	CSX	Stanley Dunkirk	OH	Dunkirk Ridgeway	DH	21	0.0	13.2	13.2	0.0	14	14	-102	192	0.4	-98%	-	-		-	ł
2.682	CR	CSX	Ridgeway	Or4	Marysville	OH	22	0.0	22.2	22.2	0.0	9.4	9.4	-12.8	27.0	13.9	.49%					h
2.881	OR	CSX	Marysville	OH	Darby	OH	19	0.0	22.2	22.2	80	50	50	-172	27.0	4.8	-82%					
C 684	CR	CSX	Darby	OH	Mounds	OH	3	0.0	5.2	22	0.0	20	2.0	.0.2	25	13	-48%				-	
C-081 C-888	CR	CSX	Mounds Decatur	IN	Adams	IN	16	0.0	2.2	1.4	0.0	20	20	0.2	2.5	13	-49%) 0%				-	1
C ERT	CR		Buffalo	NY	Draw	NY	2	2.0	55.8	57.8	20	58.5	60.5	27	91.8		20%	-	-	x	-	t
C-888.	CR	CSX	Draw	NY	Buff Cik Jat	NY	1	20	55 8	57.8	2.0	52.5	54.5	.33	97.3	101 3	4%	-	-		-	t
C-689	CR		Buff Crk Jm	NY	Buff Seneca	NY	3	20	55.8	57.8	2.0	52.5	54.5	-33	103 8	101.3	-2%					T
2487	CR		Buff Seneca	NY	Ashtabula	DH	123	2.0	50.1	52-1	2 0 2 0 2 0 0 0	50.8	52.8	0.7	102.6		-211					
198.2	CR	CSX :	Quaker	OH IN	Drawbridge	OH	8	2.9	53.4	55.4	2.0	12.9	14.9	-40 5	110.5	16.1	85%	-	-		_	į.
0.007 - 0.653	CR		Portier Willow Creek	IN	Willow Creek (vanhoe	IN	13	00	9.6 9.6	96	0.0	114	11.4	.96	213	00 227	-100% 6%	-	-		-	H
5414	CR		Woodville	OH	Walbridge	OH.	14	0.0	28	2.8	00	2.8	2.8	0.0	22	22	0%	-	-		-	t
cels :	CR	CSX	CP Maumee	OH	Oak	OH	1	0.0	15.2	15.2	0.0	4.0	40	-112	38.6	10	.97%					ľ
305	CR	CSX	Oak	OH	Walbridge	OH	2	0.0	15.2	15.2	0.0	4.0	40	-11.2	38.6	10	.97%					
- 697	CR		Readville Mansfield	MA	Boston	MA	9	150 0	01		150.0	01	150 1	00	26.3	26.3	0%	-	-		_	į.
208 (894	CR		Attleboro	MA	Readville Mansfield	MA	16.	84 0	40	88 0 52 0	84 0 48 0	40	88 0 52 0	0.0	163 106	16.3	0%					F
-26	CR		MA-R/ State Line	RI	Attleboro	MA	8	26.0	20	28 0	26 0	20	28.0	0.0	52	52	0%	-			-	F
	GR	CSX	Bridgeport	CT	New Haven	TOT	16	102.D	3.0		102 0	3.0	105.0	00	23.3	23 3	096					Ē
272	CR	CSX	Norwalk	OT	Bridgeport	CT	16	12 0	20	94.0	92.0	2.0	94.0	0.0	20.1	20.1	0%					ĺ
100	GR		New Rochelle	NY	Norwalk	CT.	25	225.0	5.0	230 0	225.0	5.0	230.0	00	42.0	42.0	0%					ſ
100	CR		Woodlawn MCI	NY	New Rochelle	NY	5	212.0	2.0	214.0	2120	20	214.0	0.0	38.5	38 5	0.01				_	į.
2.798	CR		MO Mill River	NY	Cedar Hill	NY	6	332 0 D D	20	334.0	332.0	2.0	334 0	00	72.0	72.0	0%	-	-		-	F
-	CR		Readville	MA	Walpole	MA	10	38.0	6.0	20	38.0	6.0	44:0	00	10.0	10.0	Dik				-	F
100	CR		Walpole	MA.	Franklin	MA	9	32.0		34.0	32.0	20	34 0	00	71	71	OTH				-	F
OR	CR	CSX	Transter	MA	Tower	MA	.Dt.	45.0	20	48.0	46.0	20	48.0	00	92	92	09%		-			
		CSX							20 20 36			20 20 36			71 92 15						Ì	

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Rail Line Segments and Traffic Density Changes

			NE GWENT COUNT	117.	-		15 771			PA	SSENG	ER& F	REIGHT	TRAIN	DATA			T	HRE	SHOL	DM	ET
	OWNE	RSHIP	SECH	ENTIDE	SCRIPTION			,	995 BAS	ε		POSTACO	2015/TION		MILLIO	N GROSS	TONS (1)	119	E	16	z	112
EGID	PRE	POST	BETWEE		AND		SEG LENGTH	PSGR	FHT TRN	TOTAL	PSOR	FRT	TOTAL	Δ	1995 BASE	POST	Δ	AIR	NOISE	OR TRN	RT TRN	4A7WAT
							(mi.)								1.2	12	0%		-	PS	-	-
0.011	CR	CSA	Clean Weir	MA	New Bedford	MA	19	00	3.6		0.0	36	36	90	03	03	0%				_	t
0.010	CR	CSA CSA	Swamp	MA	Wart	MA	12	0.0	10	1.0	0.0	10	1.0	00	0.1	01	0%	-	-	-	-	H
0.014	CR	CSX	Frichburg	MA	Leominister	MA	4	00	16		0.0	16	1.6	00	0.1	09	0%	+	1	1	-	t
	CR	CSX CSX	Leominister Burg	MA	Buro	MA	- 20	0.0	1.6		00	16	15	00	0.6	06	0%		1	1	-	t
2.24	CR	CSX	Mansfield	MA	Framingham C Walpole	MA	9	00	4.0	4.0	00	40	40	0.0	4.6	4.6						1
DITE	OR	CSK	Walpole	MA	Medheld Jot	MA	5	0.0	60	6.0	0.0	:6.0	6.0		46	4.6	D%					1
(inte)	CR	CSK	Medfield Jct	MA	Framingham	MA	Ť.	0.0	6.0	60	0.0	6.0	6.0	0.0	46	4.6	0%	-	-	-	-	4
0.000	CR	CSX	Boston Beacon P	MA	Framingham	MA	18	41.0	93 153	50.3	41.0	87	49.7	0.0	22.3 20.6	24.3 24.6	9% 19%	+	-	-	-	ł
0-012	CR	CSX	Framingham Westboro	MA	Westboro Worcester	MA	12	140	153	29.3	140	74.4		-0.9	236		9%	1	-	-		t
0.01	CR	CSX	Worcester	MA	Paimer	MA	39	40	20.3	243	4.0	19.9	23.9	0.4		30.5	10%					1
61734	CR	CSX	Palmer	MA	Springfield	MA	15	60	22.3	283	60	219	27.9	-0.4	27.7	29.6	7%		-			1
0 25	CR	CSX	Springfield	MA	Westfield	MA	11	20	22.3	243	2.0	22.1	24.1	-0.2	33.0	34 1	3%	-	-	-	-	ł
6.08	CR	CSX	Westfield	MA	Selki/k	NY	85	20	24.3	26.3	20	24 1	26 1	0.2	36.2	38.8	016	-	-	-	-	ł
C-UP	CR	CSX CSX	Seikirk Caman	NY	Port of Albany S Schenectady	NY	4	00	30	30	0.0	1.6	16	20	02	02	0%	+	-	-	-	t
0.038	CR	CSX	MO	NV	Poughkeepsie	NY	70	154.0	60	1	154 0	50	160.0	0.0	33.6	34.6	3%					T
C 7X0.	CR	CSX	Poughkeepsie	NY	Stuyvesant	NY	50	22.0	4.0	26.0	22.0	40	26.0		12.3	133	8%			1		ļ
5 MM	CR	CSX	Stuyvesant	NYC	Rensselaer	NIX	16	22.0	10	23.0	22.0	1.0	.230	00	10.2	10.2	0%	+	-	-	-	ļ
C.TR.	CR	CSX	Stuyvesant	NY	Selkork	NY	10	00	40		0.0	40	40	0.0	58		0%	+	-	+	-	ł
C-011	CR	CSX	Reasselaer	NY	W Albany Hoffmans	NY	4 23	7.4	3.4	1	140	34	7.5	00	68		0%	+	-	-	-	f
COTMA .	CR	CSX	W Albany Utica	NY	Synacula	NY	51	90	36.9		90	43.4		85	77 5	88.5	14%		1	x		Í
- 101	CR	CSX	Syracuse	NX	Syracuse Jct	NY	8	90	40 0		90	46.6	55.6	5.6	81.8	89.3	9%					1
5.291.7	CR	CSX.	Syracuse Jct	NY	Solvay	NY	2	9.0	38.2	47.2	9.0	44 8	53.8	66	80.1	97.1	14%			×		4
5.5%	CR.	CSX	Solvay	NY	Lyons	NIX	42	9.0	39.5		90	44 B	53.8	53	797	91.1	14%	-	-	x	-	4
2.74	CR	CSX	Lyons	NY	Fairport	NY	23	9.0	398		9.0	45 1	54 1 45 5	53	797 660	90 9 72 8	14%	+	+	*	-	ł
2 /42	CR	CSX	Fairport	NY	Rochester	NY	11	90	31 8 33 4		90	36.9	45.9	35	690	76.0	10%	+	+	tî.	-	ñ
1 41	CR	CSX	Rocheiter	NY	Buttalo	NY	4	90	52.8		90		58 5	33	100.6		39	1	1	1		1
1.11	CR	CSX	Lock	NY	CF 59	NK	3	0.0	6.0	60	0.0	60	60	DO	5.4	5.7	5%					1
2.94	CR.	CSX	Woodard	NY	For	NY	26	0.0	6.0		0,0	60	60	0.0	23	23	0%					1
5.746	CR.	CSX	CP 59	01Y	CF 22	NX	12	0.0	7.2	72	0.0	72	72	00	52	52	0%	-	+	-	-	4
2740	CR	OSK	Syracuse	NY	Oswego	NY	30	00	18		00 70			0.0	11		0%	+	+	-	+	ł
5-745	CR	CSX CSX	Buffalo	NY NY	Black Rock	NY	21	70	23 0		70	22 0	29.0	-10	16.9		120	+	+-	+	1	Ť
1.748	CR	CSX	Black Rock Farport	NY	Niagora Falls Genesee Jot	NY	14	0.0	11.4		70	112	112	02	20.0	192	.4%		1	1	1	đ
1000	CR	CSX.	Genesee Jot	NY	Chill	NY	7	0.0	11.4		60	118		0.4	210	20 7	-19				-	1
2.81	CR	CSK	Syracuse	'NY	Woodard	NY.	4	0.0	10.0	10.0	0.0	10.0	100	0.0	13.7	13.8	1.9		-	-	-	4
1.112	CR	CSX	Webbard	NY	Philadelphia	NY	84	0.0	70	70	80	70	70	0.0	10.4		19	-	-	-	-	4
L m	CR	CSK	Philadelphia	NY	Massena	PQ	71	00	110		00		70	00	91	92	01	-	+	+	-	÷
- 54	CR.	CSX	Massena	PQ	Huntingdon Cecile Jct	PQ	39	00	40		0.0	40	40	0.0	1.2	12	0	-	+	+	-	f
	CR	CSX	Huntingdon Geolle Jut	PQ	Adirondack Jct		24	00	20		0.0			0.0	12		0%	1	1			1
0.50	CR	CSX	Regis	NY.	Philadelphia	NY	11	00	1.8		00	18		0.0	0.3	03	09					1
(C.594)	CR/	CSX	Ridgeheld Height	NJ	Newburgh	NY	45	0.0	236		00	24.8		12	40.5	48 4	the second second second second second second second second second second second second second second second s	-	-	-	-	4
2.08	CR	G5X	Newburgh	NY	Selkirk	NY	80	0.0	22.2		0.0	23.4		12	42.4		137	-	+	+	-	ł
23	CR	CSX	Newtown Jcl	PA	Quakentown Warminster	PA	3/5 R	154 0	16		164 0	16		00	32 0	320	0%		+	+	-	ł
- 30	CR	CSK	Gienside Jenkintown	PA	Neshaminy Fa		10	48.0	16		48.0	16		0.0	96	-	09	+	+	+	+	1
20	ICR.	CSK	Lansdale	PA	Doylestown	PA	10	34.0	1.6		34.0	16		0.0	7.4				1	1		1
104	CR	CSX	Park Jct	PA	Belmant	PA	1	00	17.0	17.0	00	18 3	18.3	1.3	33 2	34.4						1
C.05	CR	CSR	Belmont	PA	West Fails	PA	1	0.0	24.5		0.0	27 1		28	44 3	50 1	130		+	+	-	ļ
C 768	CR	CSX	West Fails	PA	CP Newtown J	PA		48.0	111	50 0	48.0	114		03	132	15.6	189	+	+	+	-	f
0.796	CR	CSX CSX	CP Newtown Jot CP Wood	PA	CP Wood Treation	NJ.	21	48.0	120		48.0	100		-43	16.7			+	+	-	-	ĥ
C-799	CR	CSX	Trenton	NJ	Port Reading.	NJ	25	00	151		00			-43	170			1	1	1	1	Í
	CR	CSX	Brandywine	DE	Chalk Pt	MD	17	00			0.0	14			23	23	01	1				1
0.12	CR	CSX CSX	Bowle	MD	Brandywine	MD	25	0.0			0.0			00	25	25	09	1	+	-	-	į,
	CR		Brandywine	MD	Morgantown	MD		0.0			00	10		00	20	20	09	+	+	+	+	ļ
N-001	NS	NS	Attalia	AL	Nortis Yard	AL.	48	00				12 8		5.1	215		159	6 X		+	-	f
19-52-5- 	CR NS	NS	Beli Howell	DE	Edgemoor	DE		00	33 2		0.0	40.4		7.	67.5			o x	-	+	-	f
14 (50)	NS	NS	Spong	GA	Spring Scherer Coal	GA	65	0.0		2 27 2	0.0	32 5		_	60.8		119	5 x				j
	NS	NS.	NC 95th 51	IL	Pullman Jct	IL	1	0.0	20	20	0.0	5.5	5.9	34	48	134		6 X				1
5-031	NS	NS	Taylorsville		Granite City	IL	77	00	100	100	00	15 (		50	17.1			6 X	-	+	-	ļ
5-893 5-654	NS	NS	Tilton		Decatur	1 IL	71	20	221					160	292			6 8		-	×	ļ
4474	ER.	NS	Colehour	11_	Galumet Park	IL	5	0.0			00	25		14	36			XX			×	H
N-346	NS	NS.	Alexandria	IN IN	Muncie Ft Wayne	IN	16	00			0.0	27 3		13	168					+		
N-D41 N-D42	NS CR	NS	Butter Control Pt 501	IN	Indiana Hbr	IN	- 28	14.0						16 9	85 9						t	-
14-1141	NS	NS	FT Wayne TC	IN	Ft Wayne Yard		2	0.0	6.6		0.0			31	3 3		132	d x			1	1
	NS	NS	Ft Wayne	IN	Peru	UN.	63	0.0	197	19.0	00	34 9	349	15.5		46.7	1001	6 ×				l
	NS	045	Lafayette act	IN	Titton	IL	49	0.0	23.6				410	17.				X			1.0	
10140	NS	NS	Peru	IN	Lafayette Jct	IN	53	00	18.			40.0		218				6 8		-	X	ļ
71.040.1	CR	NS	Indiana Harbor	IN	South Chgo	IL NJ	8	16.0	41		160	452		4 3	813		22	X	-	- X X	+	H
	CR	NS	Crowlon	NY	Ridgewood Jd Geneva	NY	57	00			000						500				+	f
	CR.	NS	Ebenezer Jct	747	Buffalo	TNY	6	0.0	0	00	0.0						62233	1 2			1 .	ø

2 . Since a subscript to  $\Delta$  around the low subscript A can and the post-subscript power than den

12:5:97

Ra

				2018	

			SEGMENT DOUNT	110			39 ctt			PA	SSENG	ERSF	REIGHT	TRAIN	DATA			T	HRE	SHOL	DME	ET
	OWN	ERSHIP	SEGM	ENTDE	SCRIPTION			,	1995 BAS	E	5	POST ACC	MOITHERUC		MILLIO	N GROSS	TONS (1)	118	£	2	3	332
SEG ID	PRE	POST	BETWEE	N	AND		SEG LENQTH (mi)	PSGR TRN	FRT THR	TOTAL	PSOR THN	FRT	TOTAL	Δ	1995 BASE	POST	Δ	AIR	NOISE	PSGR TRN	181 184	HAZMAT
N-062	CR	NS	Suttern	NY	Campbell Hall	NY	35	18.0	47	22.7	18.0	77	257	30	82	16 1 22 4	96%	x	-	*	_	
14063	CR	NS NS	Campbell Hall Ridgewhod Jct	NY NJ	Port Jervis Suffern	NY	30	94 0	7.6	a contraction	94.0	10.6	104 6	30	23.2	518	123%	Â	-	1 x		f
74-065	CR	NS	Coming	NY	Buffalo	NY	128	00	13.6		0.0	20.6	20.6	7.0	22.8	29 C	27%	x		-		
Note	NS	NS	Buttalo FW	NY	Ashtabula	OH	128	0.0	13.0	130	00	251	25 1	121	19.6	427	118%	х.	×			
74-071	NS	NS	Bucyrus	OH	Bellevue	GH	34	0.0	26 0	26.0	0.0	34.5	34.5	85	583	812	39%		*	-		
19-072	NS	NS	Vermilion	OH	Bellevue	OH	- 26	00	15.6	15.6	0.0	27 0	27.0	114	30.6	50 1	64%	×	x	-	x	
N-071	NS CR	NS	Fairgrounds (Col	OH	Bucyrus	OH	61	00	26.0	26.0	00	343	343	83	542	763	41%	*	*	-	*	H
N-018	NS	NS NS	Cleveland Ashtabula	OH	Shortline Jct Cleveland	OH	50	00	130	130	00	36.6	36.6	236	19.9	62.4	214%	1 x	Ê			
11-078	NS	NS	lvbrydale	OH	Cincinnati	OH	6	0.0	313	313	0.0	36.0	36.0	47	49.6	65.0	31%	x	-	-		t
NUT	CR	NS	Oak Harbor	OH	Miam	OH	22	40	48.0	52.0	40	61.5	65.5	13.5	99.9	120.3	20%		×	×	×	
N=378	CR	NS	Dayton	OH	Ivorydale	OH	48	0.0	11.7	11.7	0.0	18.9	18.9	7.2	24.3	34 9	44%	- X.				
9-275	NS	NS	Oak Harbor	OH	Bellevue	OH	27	00	9.7	27	0.0	27.2	27.2	195	17.2	490	185%	×	×	-	.8	į.
15-080	NS	NS	Cleveland	OH	Vermilion	OH	37	00	13.5	135	20	34.1	34.1	20.5	25.5	46.2	81%		X	-	*	ł
N-DR1 P	CR	NS NS	White	0H DH	Cleveland Ashtabula	OH	59	20	117	14 0	00	29.7	23.8	12.1	25.9	54 5	76%	1÷	1 x	-	2	ł
14.084	CR	NS	Alliance	OH	White	OH	46	20	26.4		2.0	30 1	32.1	3.7	57 5	60.3	5%	×	1	x		t
14.085	NS	NS	Believue	OH	Sandusky Dod	4	15	00	1.4	and the second se	0.0	117	117	10.3	5.9	14 1	139%	×.	×			
rs-olef	CR	NS	Miami	DH	Airline	OH	2	4.0	55.4	59.4	40	64.0	68.0	86	112.4		9%				х.	
74:090	CR	NS	Rutherford	P.A.	Harosburg	PA	6	0.0	44 3	44.3	00	57.9	57.9	136	85.8	89.6	4%	×	×.	-	. 7.	
N-091	CRINS	NS	Hamsburg	PA	Riverton Jct	VA	133	0.0	111	111	00	19.6	19.6	8.5	18.5	337	82%	x	X	-	×	į.
14/292	CR	NS NS	Hamsburg	PA PA	Marysville	PA	9	40	42.4	48.4	40	491	531	6.7	852	100.6	143%	1	x	-		F
12:091	CR	NS	Hamsburg WM Jot	PA	Rutherford	PA	22	0.0	42.4		00	49.7	497	73	86.8	91.0	5%		-	1		f
12.195	CR	NS	Rochester	PA	Youngstown	OH	39	00	12.6		0.0	177	17.7	5.1	31.8	37 1	17%	1				ľ
N-00	NS	NS	Riverton Jct	VA	Roanoke	VA	181	0.0	39	3.9	00	12.1	121	82	8.8	28.9	228%	K.	A		A.	ſ
N-516 .	NS	NS	Elmore	WV	Deepwater	WV	60	00	0.3	03	0.0	23	23	20	0.5	63	1160%		*		-	1
N 111	GR	NS	Deepwater	WW	Fola Mine	WV	17	0.0	0.6	0.6	00	20	20	14	13	58	346%	2	1.00	-	-	H
4.425	CR	NS	Jackson	MI	Kalamazoo	M	67	80	54	13.4	80	12.0	20 0	66 92	7.8 4.8	20.4	162%	×	X	x	*	÷
N-Q1	CR	NS	West Detroit Oak Island	MI	Jackson	MI	74	56.0	29	77.5	56.0	125	68.5	-9.0	42.4		-37%	1	+^	+ ·	-	t
14.200	CR	NS	Aldene	NU	Mansile	NJ	20	00	21.8		00	12.8	12.8	9.0	416	25.8	-38%	1	1	-	-	t
N 202	CR	NS	Martville	NJ	Bethlehem	PA	52	00	19.7	187	00	17.4		.13	30.2	24.1	-20%					1
N 293	CR	NS	Bethlehem	PA	Allentawn	PA	3	0.0	17.2	17.2	00	13.3	133	3.9	248	22.8	-8%					
6.204	CR	NS	Allentown	PA	Bum	PA	3	0.0	24 9		0.0	21.3	213	-3.6	497	56 0	13%	-		-	-	H
N-205	CR	NS	Bethlehem	PA	Bum	PA	37	00	10 1	10 1	00	96	96	-0.5	151	11 7	-23%	-	+	-		÷
11,208	CR	NS.	Burn Reading Betr Jct	FA	Reading Belt J	PA	4	00	312	31 2	20	26.3	26 3	49	58.2	55.7	4%	-	1-	-	-	fi
14.208	CR	NS	Oak Island	NJ	Greenville	NJ	4	00	17 1	171	00	87	87	-84	22.9	101	-56%		1	1		t
11.200	CR	NS	Oak Island	NJ	ERAILTY	NJ	6	0.0	10 4	10.4	00	15.2	15.2	4.8	15.1	1日 4	22%		1			
N-210	CR	NS	ERBUTY	NJ	Plort Reading	N.S.	В	00	5.7		0.0	60	50		108		190	-		-		
16.211	GR	NS	Port Reading	N3	South Amboy	NJ	6	0.0	29		0.0	2.4	2.4	-0.5	32	1.6	-50%	-	-	-	-	L
79-212	CR	NS	Elound El/ook	NJ	Port Reading	NJ	15	0.0	24		00	51	51	27	75	7.6	185	+-	-	+	-	÷
N213 -	CR	NS	Philipsburg Hazelton	NJ PA	Dover	NJ PA	29	00	1.4	Acres in the second sec	00	14	14	00	0.4		0	+	-	-	-	t
14216	CR	NS	Lehighton	PA	Allentown	PA	29	00	57		00	43	43	14	82	41	-50%	1		1	-	t
N-216	CR	NS	Reading	PA	Reading Belt J	PA	2	00	6.0	5.0	00	49	4.9		85	12.4	46%					
74.233	CR	NS	West Falls	PA.	Abrams	PA.	14	00	173		0.0	140	140	.3.3	36.9	28.0	-24%					
N-238	GR	NS	Abrams	PA	WM JCI	PA	39	0.0	25 1	25 1	00	27 4		23	50.8	44 1	+13%	-			-	8
19/220	CR	NS	Morrisville	FA.	Abrams	PA	32	0.0	77	7.7	0.0	103	103	26	113	120	6%	-	-	-		4
No.221	CR	NS	Earniest	PA	Coatsville	PA	29	00	14		00	14	14	.3.3	143	17	21% -83%	+	-	-	-	ł
N-222 N-223	CR	NS	West Fails Zoo	PA	Wayne 3ct Arsenal	PA	4	00	54		0.0	93	93	39	7.1	147	107%	1	1	-	-	t
N 224	CR	NS	Arsenal	PA	Greenwich	PA	3	00	54	-	00	69		15	71	65	-8%	1				T
N-775	CR	NS	Eastwick	PA	Marcus Hook	PA	12	0.0	30		0.0	78	7.8	48	7.0	117	67%					I
5-281	CR	NS	CSX Park Jct	PA	Frankfrd Jct	F'A	5	0.0	47	4.7	0.0	61	61	14	12.9	83	-36%	1	1	1	-	ļ
4.721	CR	NS	Frankfrg Jct	PA	Pavonia	NJ	4	280	47		28.0	57	337	10	18.6		-24%	+	-	X		į.
1+220	CR	NS	Paulsboro Bulken St	NJ NJ	Carneys Pnt Winsing Int	NJ	16	0.0	17		00	17		.1 1	22	12	-45%	+	-	-	-	f
\$-212 N 237	CR	NS NS	Buison St Winslow Jct	NJ	Winslow Jct Palermo Coal	NJ	34	00	03		0.0	0.3		00	11	01	64%	-		1-	-	f
NZM	CR	NS	Pavonia	NJ	Burington	1 NJ	15	00	14		00	1.4		0.0	10		40%	1	1	1	-	t
5-241	CR	NS	Newark	DE	Hamington	DE	56	00	31		00	45		1.4	63	70	1754					ľ
64.047	CR	NS	Hamngton	DE	Pocomoke	DE	64	00	12		0.0			02	17		-6%	1				ļ
54.34)	CR	NS	Hamington	DE	Indian River Ci		43	0.0	09		00	09		00	27	29	7%	+	-	-	-	Ļ
N-244	CR	NS	Wayne	141	Croxton	NJ	19	0.0	06	0.6	00	0.9		03	08		13%	+	+	+	-	ŧ
N.243	CR	NS.	Port Jervis	NY	Binghamton Waveny	NY	128	00	79		00	120	12.0	41	115		69% 47%	+-	+	+	-	f
N 241	CR	NS	Binghamton Waverly	NY	Corning	NY	36	00	16.4		00	21.4		50	22.5		38%	+	1	+	-	f
N (248)	CR	NS	Waverly	NY	Mehoopany	PA	59	00	15		00	15	1.5	00	09		01	1	1	1	-	f
4246	CR.	NS	Sayre	PA.	Ludiowvie Coa		49	00	20	20	00	13		.07	2.4		81	1	1			t
4,290	CR	NS	Marysville	PA	Enola	PA.	5	00	231	237	00	18.4	18 4	.53	58.1	46.9	.19%					ľ
ALC: N	CR	NS	Enola	PA	Wago Yorkhav	PA	18	00	193	193	00	12.9		-64		34.8	-28%					I
4257 14261 16294	CR	NS	Wago Yorkhaven	PA	Perryville	PA	58	0.0	160				14 1	.19	403	31.5	-22"	1	1	+	-	Ļ
11.211	CR	14S	Wago Yorkhaven	PA	York	PA	10	00	17	17	00	11		-0.6	20		.5% -3%	+	-	+	-	Ļ
14.014	CR	NS	Cola	PA . PA	Lancaster	PA	14	00	20	20	00	70	70	-03	114	34	-3%	+-	+	-	-	÷
1-295	CR	NS	Rockville Watsontown	FA	Watsontown Montgomery	PA	14	00	76		00	59		-20	149		4%	1	+	+	-	+
14.75	CR	NS	Montgomery	PA	Linden North	PA	22	00	33		0.0	5.0	50	17	44		150%	-	1	1	-	f
N 20k	CR	NS	Montgomery	PA	Linden South	PA	22	.00	4.2	42	0.0	20	20	-22	10.6		-57%	1	1	1	-	t
	CR	NS	Linden	PA	Meating	DA	59	00	74		00	7.9	79	0.5	157		160	1	1	-	-	韴

 $\Delta = \cos(\theta_{0} \cos(\theta_{0} \sin(\theta_{0}  

#### Rail Line Segments and Traffic Density Changes

### ATTACHMENT ES-B MASTER TABLE OF ALL RAIL LINE SEGMENTS

			ALCONE VE CONVE	- 122.			15.172			P#	SSENG	ERSF	REIGHT	TRAIN	DATA			1 1	HRE	SHOL	MQ	-
	OWNE	ERSHIP	SEGM	ENT DES	SCRIPTION			1	995 BA5	C I	3	POST ACI	NOIDERTON		MILLIO	IN GROSS	TONS (1)	511	5	16	2	332
SEGID	PHE	POST ACQ	BETWEE		AND		SEQ LENGTH Imi.(	PSOR TRN	FRT TRN	101AL	PSGR TRN	TRT TRN	TOTAL	Δ	1995 BASE	POST	Δ	AIH	NOISE	PSGR TRN	NHL LHH	HAZMAT
N-265	CR	NS	Keating	PA	Eberlezet Jct	NY	149	0.0	4.2	4.2	00	42	42	00	77	78	1%		-	-		-
A261	CR	NS	Watsontown	PA	Straw Rdg Cl	PA	13	40	42 5	23	40	42.8	46.8	0.6	1013	88.2	-13%	1	-	1		+
1200	CR	NS	Marysville Pitcaim	PA	Jácks Run	PA	227	40	32.8	36.8	40	36.6	40.6	38	70.2	707	11					
N-264	CR	145	Jacks Run	PA	Conway East	PA	16	40	50.4		4.0	49.8	53.8	-0.6	115.5	100.7	:13%					
1/280	CR	NS	Compitt Jct	PA	Avonmre Coal	PA	28	DD	1.4	14	0.0	2.9	2.9	1.5	29	29	0%	-	-	-	-	P
A-200	CR	NS.	Avonimite Coal	P.A.	Etna	RA	44	0.0	06	0.6	0.0	17	17	11	15	17	13%	-	-	-	-	H
420.1	CR	NS	Etrta	PA	Federal St	PA	6	0.0	9.7	17	00	20	20	30	31	16.5	-43%	1	-	+	-	t
5-268	CR	NS	Pilicaim Thomson	PA	Thomson Jacks Run	DA	16	00	15.5	155	0.0	99	99	5.6	410	26.1	36			-	1	t
N280. N280	CR	NS	Thomson	PA	W Brownsville	PA	42	00	23 1	23 1	00	11.8		1133	050	33.6	-48%				1	
1.211	GR	NS	W Brownsvile	PA	Blacksvile Coal	WW	54	0.0	10.5	10.5	0.0	55	55	-50	31.4		.50	-		-	-	4
4357	CR	NS.	Blacksvie Coal	WV	Fed 2 Coal	WV	6	0.0	24		0.0	0.9	0.9 5.6	:15	27.4	24	-65	+	-	-	-	÷
A1923.	CR	NS	Emerald Coal	PA PA	Balley Mineci	PA	15 B1	0.0	84 52	8.4	0.0	31	3.1	-28	116		-45	1	+	1	-	t
5,225	CR	NS	W Brownsvile Conway East	PA	Lovenidge Coal Rochester	WV PA	61	40	57.1	81.1	40	487	527	-84	130 3	1145	-12	1	1	1		T
1/211	CR	NS	Ashtabula	GH	Ashtabula Hart	OH	2	0.0	59	59	00	40	40	-1.9	15.7	3.0	-81%			-		E
920	CR	NS	Hubbard.	OH	Oil City	PA.	80	0.0	1.9		00	1.8		-01	24		-13%	1	-	1-	-	1
14.218	CR	NS	Youngstown	OH	Aliance	OH	42	0.0	18		00	25	25	-0.3	31	28	-10%	+	+	+	-	÷
147.9	CR	NS.	Latimer	OH PA	Warren	OH	11	00	09	09	00	46		16	347	13.5	.74	1	1	1	1	t
NURS' NURS'	CR	NS NS	Rochester Yellow Creek	OH	Yellow Creek Mingo Jitt	OH	26	00	77	27	00	72	72	-0.5	185	18.9	2%		1			T
16.200	CR	NS	Mingo Jct	DH	Weirton	OH	3	00	60	6.0	00	5.9		0.9	115	115	00	1		1	-	F
14:293	CR	NS-	Mingo Jct	QH	Martinsferry	OH	18	00	1.7	17	00	1.4		-03	27	27	0%	+	-	+	-	1
14.284	CR	NS	Yellow Creek	OH	Allvance	OH	41	00	20	20	00	26	28	0.6	47	58.5	-291	+	-	+	+	+
11.285	CR	NS	Rochester Alliance	PA OH	Crestline	OH	57	20	191	39.9	20	26 3	41	-15 0	36 1	85	761	1	-	-	1	1
79.290	CR	NS	Calumbus	OH	Charleston	W	185	0.0	41	41	0.0	34		0.7	95	8.7	-8%			1		T
NUBT -	CR	NS	Charleston	WV	Dickinson	WW	14	. 00	43	4.3	00	46	4.5	03	7.6		-59		-	+	-	Ţ
11-280	CR	NS.	Dickinson	WW	Peters Jot	WW	41	0.0	16		00	27	27	11	4.5		603	-	-	-	-	+
9,295	CR	NS.	Salato	OH	Alton	QH	6	0.0	33	3.2	00	56	180	23	53	88	661	+	+	+	+	÷
14291	CR	NS NS	Aiton	OH	North Randall	OH	61	0.0	109	10 9	00	1.6		0.5	03		0	1	-	1	+	Ť
P+ 290	CR	NS	Kinsman Cleveland	OH	Vermilion (2)	OH	43	40	48 4	52 4	40	32 5	36.9	-15.5	100 8	69.5	319	1				T
74-254	CR	NS	Vermilion	OH	Oak Harbot	OH	.43	40	48 3	52 3	40	414		6.9	100.3	82.3	.181					1
A-281	CR	NS	Arrive	OH	River Rouge	M	50	0.0	118	118	60	14 5		26	22.0	240	99	+	+-	+	-	4
N-296	CR	NS	River Rouge	ML	West Detroit	MC	5	0.0	22.9		00	25 6	25.6	21	32.8	323	34	+	+	+	+	÷
4.751	CR	NS	West Detroit North Yard	M	North Yd Stening	M	6	0.0	94	80	d d d			21	47	25	-478	1	1	-	+-	t
10.218 N.299	CR	NS	Ecorse Jot	Mi	Brownstown	M	4	00	1.4			14		0.0	17		291					T
Ap. Mill.	GR	NS	Kalamazoo	881	Elkhan	2N	55	00	7.0	1.0	00	65		-0 5	0.17	86		-	-	-	-	4
	CR	NS	Jackson	MI	Lansing	MI	37	0.0	1.6		00	31	31	18	0.9		339	+	+	+	-	÷
4.507	CR	NS	Kalamazoo	MI	Grand Rapids	ME	49	40	15		40	48.2	30	-22	108 1	2.8	27	+	+	+	-	+
10-523	CR	NS	Airline Butler	OH IN	Elkhart	104	68 63	40	51 1		40	-	43 3	118	1113	85.8		1	+	+	1	T
4,004	CR	NS	Goshen	IN	Alexandria	114	99	00	47	47	0.0	58	6.8	2	13.5	19.9	471	1				T
9.326	OR	NS	Alexandha	(14	Anderson	1114	13	00	43	43	0.0	0.0	0.0	-4.3	12.0	00	-1001	1	-	-	-	
9.00	CR	NS	Elkhian	104	Porter	102	61	40	53.0	57.0	40	46.2	492	.78	1090	1012	-71	1	+	+	-	+
5.08	CR	NS	Porter	IN	Control Pt 501	IN	20	14 0 16 D	285	834	140	69 5	835	-153	1292			+	+-	+	+	÷
N-309	CR	NS	South Chgo Indiana Harbor	IN	Kankakee	1	57	00	66		00	40	40	28	123	76	-	+	1	1	+	Ť
50.312	CR	MS	Kankakee	IL.	Streator	the second	49	00	45		0.0	50	50	D.	83		119	1				I
4010	CR	NS	Streator		Hennepin	IL.	32	0.0	23	23	00	10	10	-1.2	3 3 3		-71			-	-	4
10 114	CR	NS	Schneider	IL	Wheatfld Coal	FIL	21	0.0	2.6		0.0	25	29	0.0	69	68		+	+	+	-	+
1, 115	NS NS	NS	Alexandria Mariassas	VA	Manassas Montview	VA.	142	167	137	243	167	96	263	13	20.3	3 23.4		1	+	+	1	Ť
N-316 N-317	NS	NS	Montview	VA	Altavista	VA	71	20	157	1	20	196		43	23.0	30 5		1	1	x	1	t
St Britt	NS	NS	Altavista	VA	Greensboro	NC	86	20	15.5	175	20	16 8	186	0.1	28.1		30	1				Ţ
10.010	NS	NS	Greensporo	NC	Linwood	NC	41	60	20 3	26.	50	18:		.1.5				1	+	-	-	4
	NS	NS	Linwood	NC	Salisbury	NC	9	60	24	30.1	60		3 293	31	46.5	47 3		+	+-	+	-	+
14.321	NS	NS	Salisbury	NC	Charlotte Beaumont	NC	50 70	60 20	21	27	60	18		-31	75.6	220		+	+	+	+	f
N-022 N-073	NS NS	NS	Charlotte Beaumont	SC	trayne Yd	SC	2	20	19	20	20				27 1	30.0	111	1	1	1	1	T
11-114	NS	NS	Hayne Yd	SC	Howell	GA	181	20	16.5	18 9	20	163	5 18.5	0.	4 25.6	3 29.7	161	1	1	1	1	1
n 198	NS	45	Riverton Jct	VA	Manassas	VA.	61	0.0			3 00	8.8		-2.	5 137	10.6		4	-	-	-	4
NON	NS	NS	Cincinnati	OH	EJ 3ct	KY	112	00	310	37 5	00	280		31	53	55.9		+	+	+	+-	+
4-325	NS	NS	SJ JCt	KY TN	Haniman Critico Jet	TN	144	00	37 9			2B	35.0	13				+	+	+	-	+
N-128	NS. NS	NS	Harriman Cirico Jet	TN	Coltewah	TN	12	00	371		00		44 0	71	69.4			1	T	1	1	T
	NS.	NS	Collewan	TN	Conutta	GA	12	0.0	27 9	273	10 6	33	4 33.4		5 52 2	2 590	131					1
16.3.11	NS	NS	Conutta	GA	Austeil	GA	108	00	32.8	321	3 00	35		3	66 4			1	-	+	+	4
14331 1432	NS	NS.	Austeil	GA	Howell	GA	16	20	49	51	20	50			97	1014			+	+		4
	145	NS	Scherer Goal	GA	Macon Jot	GA GA	20	00	213			40	4 27 4	51	5 42 1 0 72 6	7 50 6 5 75 0	19	+	+	+	+	4
50.034 A. 317	NB	NS	Macon Jet C of G Jet	GA GA	Brosnan Yd Langdale Yd	GA	1,46	00	15.		3 00	16		13	2 241	2 27 1		1	1	1	1	1
	NS	NS	Langdale Yd	GA	FEC Bowden		118	00	108	101	8 01	1 12.			5 16 1	18.8	3 13					1
ALT	P4S	NS	Noms Yd	AL	Austell	GA	142	20	19	21	20		5 16.5	-4 8		33.6			-	1	1	1
	NS.	145	Noms Vid	AL	Birmingham 50		5	20	37.		20	34							+	+	+	4
	NS	NS	Birmingham 50th	AL	Wilson	AL	141	00	83		00	51	7 557	-4.0				-	+	+	-	+
Ter Mill	NS.	NS	Wauhatchie	TN TN	Chattanooga Attalia	AL	82	00		63.	2 0.0								+	+	+	-+-

$$\label{eq:labeled} \begin{split} & \lambda & (\mbox{ support} \mbox{ for a static$$

# MASTER TABLE OF ALL RAIL LINE SEGMENTS ATTACHMENT ES-B

	-		WINEN COLAT	1776		-	m 733			PA	SSENG	ERAF	REIGHT	TRAIN	DATA			T	HRE	SHOL	DM	ET
	OWNE	RSHIP						,	995 BA5			POST ACO	UNISITION		MILLIO	N GROSS	TONS (1)	21	12	16	2	332
		- Contraction	SEGN	IENT DE	SCRIPTION	-					-					1		-	-		-	-
SEG ID	PRE	POST	BETWE	EN	AND		SEG LENGTH (mi.)	PSGR TRN	FRT TRN	TOTAL	P5GR TRN	FRT TRN	TOTAL	Δ	1995 BASE	POST	Δ	AiR	NOISE	PSGR 1R	FRT TRN	HAZMAT
434G	NS	NS	Birmingham 508	AL	Burstal	AL	16	20	27.8	29.8	20	25.8	27.8	-20	52 1	54.7	5%				_	-
N-045.1	NS	NS	Burstal	AL	Meridian	MS	140	20	16.2	18.2	20	16.2	18.2	44	317	36 0 22 0	14%	-	-		-	-
%.344 %.346	NS NS	NS	Meridian Oliver Jct	MS	Cliver Jct KCS Shrewsbu		194	20	17.1	19.1	20	14.9	16.9	22	29.6	29.7	Q95			-		
N-340	NS	NS	Oliver Jct	LA	Oliver Yd	LA	2	0.0	15.0	15.0	0.0	18-1	18.1	3.1	28.6	30.6	7.4		-	-		1
5-347	NS	NS	Greenspord	NC	Raleign Yd	NC	83	40	50	90	40	51	9.1	01	103	10.2	-1%	-	-	-	-	
34-3.46	NS	NS	Raleigh Yd	NC	Chocowinity New Bern	NC	100	00	24	24	0.0	24	24	0.0	69 25	64 23	.81	-	-	-	-	100
5-349 N-380	NS	NS NS	Chocowinity	NC	Lee Creek	NC	31	0.0	3.1	31	0.0	28	2.8	03	5.1	57	12%					
No.381	NS	NS	Chocowinity	NC	Plymouth	NC	. 36	0.0	14		0.0	14	14	0.0	3.0	30	0-	-	-		-	-
N.052	NS	NS	Raimgh 1ct	NC	Goldsborg	NC	50	40	16	5.6	40	16	56	00	2.2	22	0%	+	-	-	-	-
N-353 N-364	NS NS	NS NS	Goldsboro New Bern	NC NC	New Bern Morehead City	NC	36	00		20	00	2.6	26	0.6	23	25	9%	1				
N-385	NS	NS	Greensporo	NC	Guif	NC	51	00	20	19	0.0	1.4	1.4	-0.5	2.9	32	(24%)					
N 158	NS	NS	Gult	NG.	Raleigh Jct	NC	56	0.0	33	33	0.0	0.9	0.9	24	04	0.7	75%	-	-	-	-	1
N.257	NS	NS	Fayetteville	NC	Fuquay Varina	NC	44	00	14		0.0	14	1.4	49	08	0.8	33	+	-	-	-	-
N=358 N=360	NS NS	NS	Charlotte Jct Columbia	NC	Millan	GA	135	00	60	60	0.0	5.2	5.2	0.8	119	83	.30%					A
4-300	NS	NS	Salisbury	NC	Asheville	NC	142	00	6.6	6.6	0.0	5.4	5.4	-12	16.7	14.8	-11%					x
H-36.1	NS	NS	Asheville	NG	Leadvale	TN	74	0.0	84		0.0	76	76	-08	23.2	22 1	-5%	-	-	-	-	×.
N-382	NS	NS	Asheville	NC	Hayne Yd	50	69 94	0.0	1.5	15	00	24	24	09	33	42	27%	+	+	-	-	-
N-383 N-364	NS NS	NS NS	Beaumon! Andrews Yd	SC	Columbia Charlestori	SC	120	00	55		00	47	47	0.8	80	87	9%		1			
N-005	NS	NS	Murphy Jct	SC.	Waynesville	NC	27	00	24	24	00	1.6	16	-0.8	32	27	-16%					
51.366	NS	NŞ	ROCK H.D.	SC	Kershaw	SC	41	0.0	17	17	0.0	0.8	0.8	-0.9	18	10	-44	-	-	-	-	-
Ar 38.7	NS	NS	Eastover	SC	Kingville Wateree Coal	SC	5	00	22	22	0.0	16	1.6	-0.6	25	15	0%	+	1	-	-	-
4-368 4-589	NS NS	NS	Hasskainp Anderson	SC SC	Wateree Coal Seneca	50	24	0.0	20	20	0.0	14	14	0.6	19	24	261	1	1	1		1
51.976	NS	NS	Green	GA.	Wansley Jct	GA	60	0.0	35	35	00	3.5	3.5		67		-3%				-	
N. 171	NS	NS	Athens	GA	Lula	GA	39	0.0	20	20	0.0	18	18	-0.2	15	09	401	-	+	-	-	-
N K/2	NS NS	NS	Industry Yd Kranned	GA	Edgewood Forrestville	GA	95 12	00	14	14	0.0	14	14	-20	10.2	40	22%	-	-	-	-	1
76-373 66-374	NS	NS	Macon Jet	GA	Millen	GA	112	100	10.0	10.0	0.0	113	113	1.3	22.9	20.4	-11%					1
16.978	NS	NS	Million	GA	Savannah	GA	70	0.0	7.4	7.4	0.0	9.0	9.0	1.6	14.2	14.4	19		1		-	
34-376	NS	NS	Brosnan Yd	GA	Brunswick	GA	183	0.0	21	21	00	20	20	01	31	3.1	0%	+	+	-	-	+
19:377 19:378	NS NS	NS	Ft Valley Albany	GA	Dothan	GA	85	00	32	32	0.0	14	1.4	-18	31	31	0%	+	1	-	-	1
N 378	NS	NS	Vaidosta	GA	Occidental	FL	- 42	0.0	54		0.0	38	3.8	-1.0	67	66	-19					Y
14-280	NS	NS	Madison	GA	Mogul	GA	68	0.0	2.6		0.0	18	18	-08	28	23	18%		-	-	-	-
N-381	NS	NS	E Warrenton	GA	Waynesboro	GA	56	00	19		00	17	1.7	-0.2	16	16	-5%	-	+	-	-	+
N-382 N-383	NS NS	NS NS	Mahrt Childersburg	AL	Greenville Ft Valley	GA	178	00	1.8		00	19	19	01	22	23	5%	1	-	1		1
10/184	NS	NS	Ft Valley	GA	Rutland Jot	GA	22	0.0	53	53	0.0	4.4	4.4	0.9	9.8	10.0	21					
N-180	NS	NS	Walton	VA	Bulls Gap	TN	197	0.0	86		00	103	10.3	17	127	232	83 <sup>1</sup> 25 <sup>4</sup>	-		-	-	-
N 385	NS	NS	Bulls Gap	TN	New Line Sevier V.d	TN	16	00	182	182	0.0	21.1	17.7	-0.5	393 481	49.3	25	-	+	-	-	1
N-181 N-388	NS	NS	New Line Sevier Yd	TN	Cleveland	TN	88	0.0	15.1	151	00	17.1	171	20	350	44 7	28"					
71 389	NS	NS	Cieveland	TN	Ooltewah	TN	14	00	92	92	0.0	12.6	12.6	34	771	28.8	68%		1		-	1.0
14-390	NS	NS	Cleveland	TN	Conutta	TN	15	00	63		0.0	46	46	17	177	15.3	-14"	-	+	-	-	-
25.391	NS	NS	Bulls Gap New Line	TN	Leadvale	TN	17	00	44	-	0.0	5.7	57	01	114		-6%	+	+	-	-	1 2
A-393 A-193	NS	NS	Hamman	TN	Sevier Yd	TN	58	0.0	156		0.0	3.4		-62	26.0	23.1	-110					×
14-394	NS	NS	Beveriy	TN	Burley	KY	68	0.0	36	3.6	0.0	2.9	29	-0.7	56	5.2	-7%	-	-	-	-	-
4-395	NS	NS	Wauhatchie	TN	Sheffield	AL	154	00	10.2	10 2 23 1	00	10.8	10.8	0.6	24.7	29.4 51.8	199	-	+	-	-	1
N-391	NS	NS	Shetfield Wilson	AL	Memphis	AL	1:44	00	148		0.0	16.5	16.5	17	33.4	36.7	1.0%	1	-	-	-	1
AUXINE.	NS	NS	Connth	MS	Futton	KY	123	0.0	3.0	30	00	24		-0.6	30	40	33%					1
N-309	NS	NS	Buirs Gap	TN	Frisco	TN	41	00	18.0	180	00			-59	400	388		-	-	-	-	*
N.470	NS	NS NS	Frisco	TN	Appalchia St Paul	VA VA	46 79	00	122	12.2	00	93 56	93	-2.9	23.8	217 23 B	-99 69	+	-	-	-	-
%-401 N-4501	NS	NS	Appalachia	VA	Andover	VA	19	30			0.0	54		48	172	133	-23%		1	1	-	1
14.403	NS	NS	Appalachia	VA	Norton	VA.	13	0.0	5.1	61	00	43	43	-1.8	8.8	8.9	10					1
N-404	NS.	NS	Appalachia	VA	Bundy	VA	11	0.0	31	31	00	23	23	-0.8	5.5	5.4		-	-	+	-	+
4.455	NS NS	NS	Knoxville Frisco	VA TN	Alcoa	TN	- 15	00	17		0.0	17	17	00	0.9	10	111	+	-	-	-	+-
N-400	NS.	NS	Burstal	AL	Kingsport Seima	AL	89	0.0	106		00	72	7.2	34				1	1			T
14.408	NS	NS	Selma	AL	Mobile	AL	162	0.0	46	4.6	00	4.9	49	03	82	85	4		1			1
44.9	NS	NS	Witton	AL	Roberta	AL	5	0.0			00	60	6.0	0.0	77	80		+	-	+	-	-
124.0	NS	NS	Roberta Berry Com	AL	Coosa Pines Partish	AL	33	00	28		00	28	28	0.0	29			+-	-	+	-	+
14-411 No-412	NS NS	NS	Berry Coal Demopolis	AL	Manon Jcf	AL	38	00	20	20	00	20	2.0	00	15			1	1	1	1	
N.413	NS	NS	Maplesvile	AL	Montgomery	AL	51	0.0	20	17	0.0	20	20	0.3	7.4	1.6						-
5/414	NS	NS	Clinton	TN	Fruden	TN	62	00	12	12	0.0	12		0.0	12	11	-8		+	-	+	+
6408	NS	NS.	Louisville	KY	SJ Jct	KY.	87 263	00	137		00	112	112	-25	248	233		-	-	-	+	×
54418 5-411	NS NS	NS	Louisville Norfolk	KY VA	E St Louis Burkeville	IL VA	138	00	20.4		00	215	215	11	65 1	652	D		1	1	1	+
4.8.8	NS	NS	Burkeville	VA	Pamplin	VA	37	00	114	114	00	116	116	02	18 4	18.3	-19	1		1		1
-9-410X (	NS.	NS	Pamplin	VA.	Roanoke	VA	85	00	18.3		0.0	18.9		06	28.3	32 1		1	-	-	-	
19.421	NS	NS	Roanoke	VA	Salem	VA	7.	00	343		00	40.4		61	70.8			-	-	-	+	
75-421 74-425	NS NS	NS NS	Salem Walton	VA VA	Walton Narrows	VA	33	00	28.2	282	00	371		39	383			+	+	+	-	*

). Since a strong T were as the line transfer and real and are then transfer theme provides the T -constraints

Rail Line Segments and Traffic Density Changes

			SERVICE COUNT	0.05	e		16,221	PA			1		REIGHT	RAIN				-	HRE	SHOL	DM	-
	OWN	ERSHIP	SEGN	ENTDE	SCRIPTION				995 BAS	E		POST AC	NUISITION		MILLIO	N GROSS	TONS (1)	118	2	3	3	332
SEG ID	PRE	POST	BETWEE	IN	AND		SEG LENGTH (mi.)	PSOR	ERT TRA	TOTAL	PSOR TRN	FRT TRN	TOTAL	Δ	1995 BASE	POST	Δ	AIR	NOISE	PSGR 1RN	FRT TRN	HAUMAT
6,47)	NS	NS	Narrows	VA	Kellysville	WV	11	0.0	34.1	34 1	00	35.4	35.4	13	104 6	108.9	4%	+	-	-	-	-
74424	NS	NS	Kellysville	WV	Bluefield	VA	22	0.0	31.9		0.0	31.6	316	03	96.8	96.3	-1%	-				E
19.4211 A 128	NS	NS	Abilene Burkeville	VA	Altavista	VA	16	00	39		0.0	39	3.9	12	6.5 50.4	54	-17%	+	-	-	-	4
36421	NS	NS	Altavista	VA	Tinkers Drk Co	VA	41	00	100	88 100	00	84	8.4	16	59.3	55 8	-6%	-	-	-		÷
19-128	NS.	NS	Tinkers Cirk Con	VA	Salem	VA	13	00	7.5	76	0.0	77	77	0.1	473	50 9	8%	1	-		-	t
3,425	NS.	NS	Salem	VA	Narrows	VA	66	00	120	120	0.0	13.5	13.5	1.5	64 0	74 5	16%					t
19-21	NS	NS	Burkeville	VA	West Point	WA.	91	0.07	19	19	0.0	17	1.7	02	24	2.6	B%					
Pa-aby	NS NS	NS	Petersburg	VA	Hopeweil	VA	9	0.0	24		0.0	2.0	2.0	-0.4	32	30	-5%	-	-		_	E
19-432	NS.	NS NS	Pole ML Suttolk	VA	Edgerton	VA	3	00	84		00	8.0	80	-04	164	123	-25%	-	-	-	-	1
14434	NS	NS	S Rolanoke	VA	Belews Crk Jct	And the second second	99	0.0	70	70	00	79	7.9	0.9	17 B	17.8	Oliv	+	+	-	-	ŧ
11.235	NS	NS	Belews Crk Jct	NC	Winston Salen		23	0.0	5.6	56	00	37	37	19	12.7	83	-35%	1		-	1	t
11430	NS-	NS	Winston Salem	NC	Greensboro	NC	26	0.0	47	47	00	27	27	-2.0	6.4	5.6	-13%					T
79.497	NS	NS	Belews Crk Jct	NG	Belews Crk CI	NC	4	00	23		0.0	27	27	0.4	72	82	1411		1		-	
16-439	NS NS	NS NS	Kinney Yd Vabrook	VA	Brookneal	MA	32	0.0	17	17	00		21	0.4	20	- 2.5	25%	-	-	-	-	E
Nat	NS	NS	South Boston	VA	Mayo Jci Clover	NC VA	39	0.0	06	37	00	4.4	44	07	10.6	12.8	21%	+	-	-	-	÷
16.641	NS	NS 1	Kimballton	VA	Norcross	VA	2	0.0	14		00	29	2.9	1.5	12	1.8	50%	1	-	-	-	ł.
11-642	NS	NS	Elkton	VA	Harrisonburg	VA.	20	0.0	16	1.6	0.0	26	26	10	26	28	8%			-	-	T
4.427	NS	NS	Bluefield	VA	lager	WV	56	0.0	277	217	00	28.7	28.7	1.0	83.5	84 1	1.9%					C)
1-444	NS	NS NS	lager Wharncliffe	WV	Whamplitte	WV	16	00	35 1	35 1	0.0	35.4	35.4	03	1011	1017	1%	-	-			F.
16.440	NS	NS	Williamson	WV	Williamson Wolf Creek	WV.	32 18	00	36.0	36 0	00	36.6	36.6	19	99.7 93.0	100.2	196	-	-			F
N 847	NS	NS	Wolf Creek	WW	Kenova	DH	18	0.0	245	245	00	25.3	26.3	19	93.0	67.0	-1%	-	-	-	-	1
1.444	NS	NS	Kenova	OH	Fairgrounds (C	OH	130	0.0	21.1	21 1	00	23 3	233	22	52.7	53 2	190	1		-		
11.849	NS	NS	Blueheld	VA.	Cedar Bluff	VA	34	00	57	67	0.0	6.9	69	0.2	15.8	16.8	6%					
4.250	NS	NS	Cedar Bluff	VA	St Paul	VA	42	0.0	11.1		00	10.4	10.4	-0.7	27.6	28.4	3%					
19.451	NS	NS	St Paul Norton	VA	Norton	VA	22	00	6.4		0.0	5.4	5.4	10	173	18.5	7%		-			
P6.452 1	NS I	NS	Weller	VA. VA	Romsey	VA	46	0.0	35	35	00	29	29	-0.6	78	76)	-3%	-	-		_	-
10.454	NS	NS .	Weller	VA	Devon	w	27	90	57	57	0.0	65	42	0.8	223	23 1	4%	+	-		-	÷
N.465	NS	NS	Cedar Bluff	VA.	lager	WV	45	00	6.7	6.7	0.0	64	64	03	18.9	18.8	-1%	-		-	-	t
TERSE	NS	NS	Kellysvillo	WW	Elmore	WV.	47		37	37	- 0.0	54	5.4	17.	8.7	13.7	57%		-			t
faith?	NS	NS	Elmore	WV	Pinnacle Crk Jo	WV	17	00	4.6	4.6	0.0	49	4.9	03	12.9	13.9	8%					
19.415	NS NS	NS NS	Pinnacie Crk Jcf Simon	WW WW	Simon Whamcliffe	w	23	00	17	17	0.0	20	20	0.3	41	49	20	-	-			-
1,400	NS	NS	Simon	WW	Kopperston	wv	21	00	19		00	19	41	0.0	121	13.2	9%	-			-	-
S. Alto	NS	NS	Pinnacle Crk Jot	WW	Pinnacle Crk	WV	4	00	29	29	00	29	2.9	0.0	8.8	8.9	1%	-	-	-	-	-
NHU	NS	NS	Mullens	WW	Winding Gulf	WV	29	0.0	04	0.4	0.0	0.4	0.4	0.0	0.6	0.9	50%				-	1
12-001	NS	NS .	Amigo	WV.	Stone Qual Jot	WV	1	00	0.3	0.3	0.0	03	03	00	03	0.3	-0%					
11.014	NS NS	NS NS	Wolf Greek	WV	Pontika	KY	12	0.0	43	43	0.0	4.5	4.5	0.2	12.8	13.6	6%					
Pp-200	NS		Pontiki Marrowbone	KY WV	Pevier	KY.	10	00	03	35	00	03	37	0.0	0.6	0.6	0.5		-	-		
14-401	NS	NS	Bellevie	OH	Naugatuck Ft Wøyne	IN	120	DO	23.9	23.9	00	28.5	28.5	0.2	92	110	20%	-	-	-	-	-
fs alls	NS	NS	Ft Wayne	IN	Hobart	IN	120	0.0	11.7	11.7	0.0	15 1	11 1	-0.6	22.0	14.4	-35%	1		-	-	-
5-00	NS	NS	Hobart	04	Hammond	IN.	17	0.0	26.3	26.3	00	112	11.2	-35.1	39.1	12.4	-66 1					
040	NS	NS	Hammond	UN4	Calumet	TL	8	0.0	26.5	-26.5	00	13.2	13.2	,133	40.7	13.5	-67%					
GAT	NS	NS NS	Hadley	IN.	Hobart	IN.	111	00	6.8	6.8	0.0	0.9	0.9	-59	93	23	-75%					
443	NS	NS	Argos Buñalo	NY.	Black Rock	NV.	22.7	00	23	10.6	0.0	1.4	1.4	0.9	23	01	-96%			-	-	
12214	N5	NS	Black Rock	NY	St Thomas	ON	131	0.0	1.8	1.8	00	25	51	55	143	50	-58%	-		-	-	-
2.415	NS	NS	St Thomas	ON	West Detroit	MI	94	00	20	20	0.0	24	24	0.4	27	36	33%	-		-	-	
448	NS	NS	Oakwood	MI	Butlet	IN.	107	00	15.2	15.2	0.0	173	17.3	23	18.3	22 51	23%					
ALAS!	NS	NS	Decatur	HL.	Moberty	MO	209	0.0	10.8	10.8	0.0	17.3	173	6.5	15.9	28 1	1714					3
NATE NATE	NS NS	NS NS	Moberly CA Jct	MO	CA Jot	MO	94	00	18.6	18.6	00	25.9	25.9	73	277	39.4	42%					1
N-4 00	NS		Feeder	ON .	N Kansas City Wellend	ON	31	00	20	30.0	00	313	313	13	50.8	563	1194	-	-	-	-	3
N-491	NS	NS	Sheffield Yard	OH	South Lorain	OH	4	0.0	36	20	00	20	2.0	00	26	13	27%			-	-	
19-482	NS	NS	Milah	QH	Homestead	OH	35	0.0	41	41	00	00	0.0	-41	60	00	-100%	-	-	-	-	
5-482	NS.	NS	Hamestead	DH	Oak Harbor	OH	20	0.0	6.6	86	00	4.4	4 +1	.22	16.6	93	.44%				-	
10-484	NS	NS	Ft Wayne	tN	Munce	(N)	64	0.0	19.6	19.6	0.0	150	150	-46	28.6	215	-2511					
h 485	NS		Muncie	IN	Ivorydale	OH	106	0.0	20.6	20.6	00	20.5	20.5	-01	34.4	40.9	19%					
19-480. 19-881	NS	NS NS	Vera Sardenva	OH OH	Sardema Norwood	OH	57 43	0.0	34	34	00	00	0.0	34	57	0.0	-100%	-		-	-	
ta 204	NS		Norwood	OH	ivorydale	OH	43	0.0	34	34	0.0	20	17	.17	57	03	951	-	-	-	-	
1.481	NS	NS	afayette sct	IN	Alexandna	IN	67	00	30	30	00	48	48	1.8	53	78	47%	-	-	-	-	
5.490	NS	NS I	Gibson City	(L	Bement	IL	41	00	54	54	0.0	70	70	16	11.0	16.4	49%		-	-	-	
1(4)!	NS		Gibson City	IL.	E Peona	11_	72	00	31	31	0.0	0.9	0.9	-22	40	2.6	-35%					
20492	NS		Decator	IL	Taylorville	TL.	30	0.0	87	97	0.0	167	16 7	7.0	16.0	19.9	24%					)
Maist .	NS	NS 0	Gramte City	IL.	E St Louis	IL	1	00	18.9	18.9	00	18.8	18.8	-0.1	18.6	14.8	-20%					
A-414	NS	NS B	E St Louis	MO	Luther Moberly	MO	141	00	20.8	20.8	00	22 0	22.0	12	201	242	201e	-		-	-	
Laje	NS	NS	Coffeen Coal	IL IL	CNW Madison	- Unit	53	00	10.2	10.2	00	11.4	0.7	12	13.8	14.4	4%	-		-		
4.687	CR		Calamazoo		Porter	IN	97	8.0	0.7	8.7	80	7.0	15.0	63	78	20.4	162%		-	x	-	
1.494	NS	NS I	C 95th St	11	Gibson City	UL I	99	40	20	6.0	4.0	52	92	3.2	5.6	13.8	146%		-	*	-	
9-89K./	NS	MB C	Calumet	IL.	Landers	IL I	8	00	23.2	23.2	00	18.0	18.0	-52	32.7	0.4	-99%				-	-
-	LN/TH.		Davis		Perryville	MD	21	73.0	4.5	77.5	73 0	12.4	85.4	79	25 B	44 8	7.4%					
	LMTY		laitimane lowie	MD	Bowle Laridover	MD	29	1170	24	119.4	1170	93	124.7	53	247	367 430	49%	×.		x		×
	LUTE	JANTE B																				

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Rail Line Segments and Traffic Density Changes

			SEGMENT COUNT	10	122		36 133			P	ASSEN	GER&	FREIGH	TRAIN	DATA			1	HRE	SHOL	DN	AE T
	OWN	ERSHIP	SEG	MENT D	ESCRIPTION				1995 BAS	SE		POST A	COUISITIO	N	MILLI	ON GROSS	TONS (1)	511	2	3	3	-
SEG ID	PRE	POST	BETWE	EN	AND		SEG LENGTH (mL)	PSGR TRN	FRT	TOTAL	PSGR TRN	FRT	TOTAL	Δ	1995 BA 3E	POST	Δ	AIR	NOISE	PSGR TRN	FRT TRN	HAZMAT
S-021	CR	SHARED	West Detroit	MI	North Yard	MI	7	0.0	79	79	0.0	13 2	132					-		a	-	1
5-022	CR	SHARED	West Detroit	MI	Delray	MI	2	00	127	127	00	16			62	136	119%	x	х.			
\$-000	AMTK	AMTE	Lane	NJ	Union	NJ	7	277 0	34	-	277 0	110		76	114	17.5	53%	x	_			E
5-031	AWTH	AMTH	Midway	NJ	Morrisville	PA	17	175.0	3.4	-	1750	110		76	58.6	75.6	. 9%	x		X		
\$-032	CR	SHARED	PN	NJ	Bayway	NJ	9	0.0	10.9		0.0	162		53	37 2	54.2	46.16	x		X. 1		1
5-033	AMTR	AMTK	Union	NJ	Midway	NJ	22	189.0	34		189.0	110		76	10 0	16.2	62 1	X	1			E
5-040	AMTK	AMTK	Arsenal	PA	Davis	DE	25	131 0	23	133 3	131.0	10.5		82	414 284	58.4	4" 16	A.,	-	X		
S-041	AMTH	AMTH	Momsville	PA.	200	PA	29	145 0	34		145 0	71		37		46.4		×.	X	x	×	
5-042	CR	SHARED	South Philadelph	PA	Field	PA	5	0.0	82	82	0.0	21 1		12.9	32.9	412	25%	X	-	X	_	
5-200	CR	SPARED	W Brownsville	PA	Waynesburg	PA	28	0.0	19.0	190	00	19.0		00	6.3 46.8	25.5	303%	x	X		×.	
\$ 201	CR	SHARED	W Brownsville	PA	Catawba Jct	PA	66	0.0	5.6	56	00	7.4		18		46.8	0%	_	-			
\$-202	CR	SHARED.	Catawba Jct	PA	Lovendge Min	e wv	13	0.0	36	36	0.0	36		0.0	60	8.0	33%	_				
5-203	CR	SHARED	Waynesburg	PA	Wana	PA	19	0.0	64	6.4	0.0	64		0.0	60	60	0%					
5.204	CR		Wana	PA	Chit	PA	2	0.0	34	3.4	00	34		00	20 5	20.5	0%	_	-			
\$-205	CR.	SHARED	Clif	PA	Blacksville	PA	5	0.0	3.4	3.4	0.0	34		00	58	5.8	0%					
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S-207	CR	SHARED	Clif	PA	Federal	PA	6	0.0	1.8	18	00	1.8		0.0	24.4	24.4	0%	-		-	_	
8-208	CR	SHARED	North Yard	MI	Utica	MI	17	0.0	83	83	0.0	96		00	58	58	0%					
S-209	CR	SHARED	Delray	Mi	Trenton	Mi	10	00	14 8	148	0.0	16.5	96	1.3	5.8	57	-2%	_				
\$ 210	CR	SHARED	Nest Detroit	ML	Dearborn	MI	5	60	16	7.6	6.0	34		17	27 9	24.0	-14%					
5-211	CR	SHARED	Nave	NJ	N Bergen	NJ	6	0.0	44	44	0.0	14	94	1.8	32	32	0%	-		X		
\$212	CR	SHARED	N Bergen	NJ	Ridgefield Hts	NJ	6	0.0	23.1	23.1	0.0		14	-30	12.7	0.4	-97%					3
8-213	NUT	SHARED	Aldene	NJ	High Bridge	NJ	39	56 0	16	57.6	55 0	22.1	22 1	-10	40.5	42.1	4%	-				. 9
5-214	NJT	SHARED	Union	NJ	Red Bank	NJ	16	88.0	16	89.6	88.0		57.6	0.0	13.0	13.0	0%					
5-215	CR	SHARED	Red Bank	NJ	Lakehurst	NJ	29	0.0	16	1.6	0.0	16	89.6	0.0	13.0	130	0%					
5-218	CR	SHARED (	CQ	NJ	Monmouth Jct	NJ	19	0.0	34	34		16	1.6	00	02	0.2	0%		_			
5.217	CR	SHARED &	Bayway	NJ	PD	NJ	6	00	6.0	60	00	34	34	0.0	0.2	0.2	0%					
3-218	CR	SHARED A	D	NJ	Wood	NJ	3	00	4.0	and the second se	00		77	1.7	7.0	103	47%					
S-219	CR	SHARED .	lamesburg	NJ	Farmingdale	NJ	19	0.0	16	4.0	0.0	40	40	0.0	36	3.6	1%					0
\$-220	CR	SHARED 1	lave	NJ	CP Green	NJ	4	0.0	18.5	16	00	16	1.6	00	00	0.0	0%		0.1			
S-221	CR	SHARED !!	lave	NJ	Croxton	NJ	2	0.0	18.5		00	16.5	16.5	-2.0	252	25.4	196					
-222	CR	SHARED (	Green	NJ	Oak Island	NJ		0.0	18.5	18.5	00	15.5	15.5	-30	25.2	25.1	0%					
1.223	CR	SHARED F	tack.	NJ	Croxton	NJ	4	0.0	17.7		0.0	18.5	18.5	00	25.2	27.9	1196					
224	CR	SHARED C	roxton	NJ	North Bergen	NJ		00	191	177	0.0	82	82	-9.5	17.2	83	-52%					X
-225	CR	SHARED V	Valdo	NJ	Hack	NJ	2	00	48		0.0	19.2	19.2	01	25.1	28.4	13%					
226	CR	SHAPED +	lack	NJ	Kearny	NJ		0.0	17.4	48	0.0	2.8	28	-20	71	07	-90%					
-227	CR	SHARED K	earny	NJ	Valley	NJ	4	0.0	19.6		0.0	82	8.2	-9.2	26.5	83	-69%					
228	CR	SHARED V	alley	NJ	NK	NJ		00		196	0.0	5.9	5.9	-13.7	212	4.1	-81%					_
-229	CR		t Reading Jct	NJ	Port Reading	NJ	16	00	24.5	24.5	00	23 7	23.7	-0.8	42.5	38.6	-9%					
230	CR		K	NJ	Boundbrook	NJ	22	56 0	36	36	00	53	53	17	5.5	78	43%				-	
231	CR	HARED	oundbrook	NJ	Pt. Reading Jct	NJ		and the second se		92.0	56.0	25.5	815	-10.5	46.4	42.7	-8%			-	-	x
-232	CR	HARED P	ark Jet	PA	Frankford Jct.	PA	6	00	34.2	34.2	0.0	27 4	27.4	-6.8	44.2	45.5	31%			-	-	×
-233	CR	HARED F	rankford Jct	PA	Camden	NJ		00	78	7.8	0.0	10.7	10.7	29	13.5	17.2	27%			-		x
-234	CR		astwick	PA	Lester	PA	- 4	0.0	7.8	78	0.0	107	107	2.9	13.3	17.2	29%		-	-	+	×
			loodbury	NJ	Paulsboru	NJ		0.0	32	3.2	0.0	3.2	3.2	00	55	56	196			-	-	X
			aulsboro	NJ	Deepwater		6	0.0	32	3.2	0.0	32	3.2	0.0	37	3.7	0%	-	1	-		Ŷ
			ooper	NJ	and the second se	NJ	16	00	2.0	20	0.0	20	20	0.0	37	37	0%	-	-		+	-
	MTH		erryville	MD	Woodbury	NJ	9	00	20	20	00	20	20	0.0	45	4.5	0%	+	-	+	+	-
	CR		avonia	NJ	Baltimore	MD	32	88.0	143	102.3	88.0	15.6	1036	13	419	44 9	7%	1	+	x	-	x
		Conception and the second	bodbury		Woodbury	NJ	9	0.0	38	38	0.0	50	5.0	12	90	53	-4195	+	+		-	1
		COLLED AN	our y	NJ	Milville	NJ	30	0.0	14	1.4	00	14	14	0.0	15	0.9	-40%		-	-	-+-	

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## Conrail Acquisition

# **Frequently Asked Questions**

#### 1. What is the proposed project?

a second

On June 23, 1997, CSX and Norfolk Southern (NS) railroads jointly applied to the Surface Transportation Board for authority to acquire certain properties of Conrail.

## 2. What changes are anticipated as a result of the proposed project?

CSX and NS plan to acquire and operate various Conrail rail lines as well as other properties such as rail yards and intermodal facilities. Operating changes may include increased freight traffic over rail lines, construction of new rail lines and intermodal facilities, and abandonments of rail lines.

#### 3. What is the role of the Surface Transportation Board?

The Surface Transportation Board (Board) is the Jederal agency that has authority to review and license (i.e. approve, deny, or approve in part) projects like the proposed Conrail acquisition. Typically, when the Board licenses a project, it imposes environmental protective conditions.

#### 4. What is the role of the Section of Environmental Analysis?

The Board's Section of Environmental Analysis (SEA) is the office that evaluates and considers, on behalf of the Board, the potential environmental impacts related to proposed acquisitions and mergers. SEA is conducting an independent environmental review and will make final environmental recommendations, which the Board will consider in making its decision in this case.

## 5. What type of environmental review will the Board conduct?

The Board has determined that an Environmental Impact Statement (EIS) is warranted for this project due to the nature and scope of potential environmental issues associated with the proposed Conrail acquisition.

## 6. What kind of activities will be considered in the Board's environmental analysis?

The Board will analyze the potential environmental impacts (including safety) of increased rail traffic over rail ime segments, rail yards, and intermodal facilities; rail line abandonments; and rail line constructions.

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#### 7. What is the process for environmental review?



SEA will issue a Draft Environmental Impact Statement (DEIS) in December 1997. The public will have 45 days to review and comment on the DEIS. After considering all public comments, consulting with federal, state and local agencies, and conducting further independent analysis, SEA will prepare a Final EIS (FEIS). SEA plans to distribute the FEIS, which will include its final environmental recommendations to the Board, in May1998.

## 8. When will the Board issue its final decision?

After the Board considers the entire public record, including your environmental comments, it will issue its final decision on July 23, 1998.

#### 9. Who do I contact with environmental questions regarding the proposed project?

SEA has established a toll-free environmental hotline (888-869-1997) and a SEA Conrail Acquisition Web site (www.conrailmerger.com) to accommodate environmental inquiries.

### 10. How do I review a copy of the DEIS or FEIS?

SEA will distribute copies of the DEIS and FEIS to interested parties and also make them available through your state and local governments. You may write to the address below to specifically request that you be placed on the distribution list.

## 11. How do I ensure that SEA considers my environmental concerns?

To ensure that SEA considers your environmental concerns, send your written comments, including a signed original and 10 copies, to the following address:

Office of the Secretary Case Control Unit <u>Finance Docket No. 33388</u> Surface Transportation Board 1925 K Street, NW, Room 500 Washington, DC 20423-0001

Attn: Elaine K. Kaiser Chief, Section of Environmental Analysis Environmental Filing



Decision ID No. 28629

Service Date: December 12,1997 Comment Date: February 2,1998

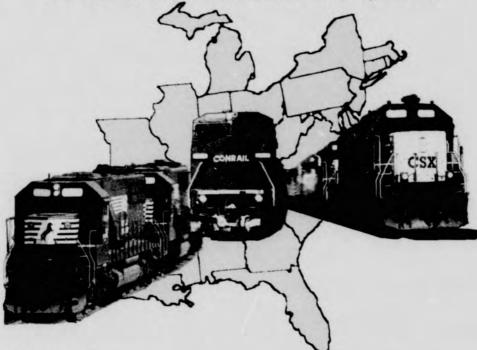
## DRAFT ENVIRONMENTAL IMPACT STATEMENT

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 1

Chapter 1: Purpose of and Need for the Conrail Acquisition

Chapter 2: Proposed Action and Alternatives

Chapter 3: Analysis, Methods and Potential Mitigation Strategies

Chapter 4: System-wide and Regional Setting, Impacts and Proposed Mitigation

prepared by:

#### Surface Transportation Board Section of Environmental Analysis

1925 K Stre∈t, NW • Washington, DC 20423-0001

Information Contacts:

Elaine K. Kaiser, Chief Section of Environmental Analysis 888-869-1997 Michael J. Dalton Environmental Specialist 888-869-1997

IMPACT STATEMENT

#### 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

- Chapters 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.

### GLOSSARY

at-grade roadway crossing	The location where a local street or highway crosses railroad tracks at the same level or elevation.
attainment area	An area that meets National Ambient Air Quality Standards (NAAQS) specified under the Clean Air Act.
A-weighted Sound Level (dBA)	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.
ballast	Top surface of rail bed, usually composed of gregate (i.e., small rocks and gravel).
Best Management Practices (BMPs)	Techniques recognized as very effective in providing environmental protection.
Board	Surface Transportation Board, the licensing agency for the proposed Conrail Acquisition.
borrow material	Earthen material used to fill depressions to create a level right-of-way.
branch line	A secondary line of railroad usually handling light volumes of traffic.
bulk train	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.
consist	The make-up of a train, usually referring to the number of cars.
construction footprint	The area at a construction site subject to both permanent and temporary disturbances by equipment and personnel.
Class I Railroad	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.

Criteria of Effect	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.
criteria pollutant	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 mest national air guality standards.
cultural resource	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.
Day-Night Sound (L <sub>dn</sub> )	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.
dBA	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.
decibel (dB)	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.
deciduous	Any plant whose leaves are shed or fall off during certain seasons; usually used in reference to tree types.

dray	A local move of a trailer, truck, or container.
emergent species	An aquatic plant with vegetative growth mostly above the water.
endangered species	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.
failure mode and effects analysis (FMEA)	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.
611	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.
flat yard	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.
Flood Insurance Rate Maps	Maps available from the Federal Emergency Management Agency that delineate the land surface area of 100-year and 500-year flooding events.
fluodplain	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.
frog	A track structure used where two running rails intersect that permits wheels and wheel flanges on either rail to cross the other rail.
habitat	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).

haulage right	The limited right of one railroad to operate trains over the designated lines of another railroad.
hazardous materials	Any material that poses a threat to human health and/or the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive.
highway/rail at-grade crossing	The location where a local street or highway crosses railroad tracks at the same level or elevation.
historic property	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.
hump yard	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.
interlocking	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.
intermodal facility	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.
intermodal train	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).

key routes 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. The Association of American Railroads (AAR) defines key train 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 includ ximum speeds, and meeting and passing procedures. Ldn Nighttime noise level (L<sub>n</sub>) 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. Level of Service (LOS) 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. lift A lift is defined as an intermodal trailer or container lifted or to or off of a rail car. For calculations, lifts are used \* determine the number of trucks using intermodal facilities. locomotive, road One or more locomotives (or engines) designed to move trains between yards or other designated points. locomotive, switching 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.

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

rail spur	A track that diverges from a main line, also known as a spur track or rail siding, which typically serves one or more industries.
rail yard	A location where rail cars are switched and stored.
railbanking	A set-aside of abandoned rail corridor for recreational and/or transportation uses, including reuse for rail.
receptor/receiver	A land use or facility where sensitivity to noise or vibration is considered.
right-of-way	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.
riparian	Relating to, living, or located on, or having access to, the bank of a natural water course, sometimes also a lake or tidewater.
riprap	A loose pile or layer of broken stones erected in water or on soft ground as a guard against erosion.
riverine wetland	All wetlands and deepwater habitats contained within a channel, either naturally or artificially created.
route miles	Distance calculated along a railroad's main and branch lines.
ruderal	An introduced plant community dominated by weed species, typically adapted to disturbed areas.
scrub-shrub	Areas dominated by woody vegetation less than 6 meters (20 feet) tall, which includes shrubs and young trees.
set out	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.
Section 106	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.

Proposed Conrail Acquisition

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A physical disturbance in a medium (e.g., air) that is sound capable of being detected by the human ear. A quantitative measure of the noise exposure produced Sound Exposure Level (SEL) 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 SEL is the overall noise environment. 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. Refers to a removal of property, an acquisition of righttake or taking of-way, or a loss and/or degradation of species' habitat. A species that is likely to become an endangered species threatened within the foreseeable future throughout all or part of its range, and is protected by state and/or federal law. The right or combination of rights of one railroad to trackage rights 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. A track arrangement consisting of a switch and frog with turnout 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. A train consisting of cars carrying a single commodity, unit train e.g., a coal train (see also bulk train). An all inclusive term that refers to many types of water resources 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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### LIST OF ACRONYMS AND ABBREVIATIONS

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

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Acronyms and Abbreviations

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

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

Acronyms and Abbreviations

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

Proposed Conrail Acquisition

Draft Environmental Impact Statement

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### CHAPTER 1 Purpose of and Need for the Conrail Acquisition

This chapter describes the purpose and need of the proposed Conrail Acquisition as well as the environmental review process for this project. It discusses the role of the Surface Transportation Board's (Board), Section of Environmental Analysis (SEA) in conducting the environmental review and the potential environmental impacts of the Conrail proposal. This chapter also provides an overview of the Board's thresholds for environmental analysis, the activities evaluated in the Draft Environmental Impact Statement (EIS), and the Board's general approach to mitigation. In addition, it highlights SEA's public outreach as well as the role of the public, including Federal, state and local agencies, parties of record, communities, and other interested parties.

#### 1.1 PROPOSED ACTION & PURPOSE AND NEED

#### 1.1.1 Proposed Action

On June 23, 1997, CSX Corporation (CSX)<sup>1</sup>, Norfolk Southern Corporation (NS)<sup>2</sup>, and Conrail Inc. (Conrail)<sup>3</sup> filed a joint Application with the Board in Finance Docket No. 33388 seeking authority for CSX and NS to acquire control of Conrail. The Applicants<sup>4</sup> have discussed in their Application how CSX and NS would divide most of Conrail's railroad facilities and would jointly operate other Conrail railroad facilities located in Detroit, northern New Jersey and southern New Jersey/Philadelphia (Shared Assets Areas). This proposal is a "major transaction" under the Board's regulations at 49 CFR Part 1180 which govern railroad mergers and acquisitions.

<sup>3</sup> "Conrail Inc." denotes Conrail Inc. and Consolidated Rail Corporation.

<sup>&</sup>lt;sup>1</sup> "CSX Corporation" denotes CSX Corporation and CSX Transportation, Inc.

<sup>&</sup>lt;sup>2</sup> "Norfolk Southern Corporation" denotes Norfolk Southern Corporation and Norfolk Southern Railway Company.

<sup>&</sup>lt;sup>4</sup> CSX, NS, and Conrail are referred to collectively as the "Applicants."

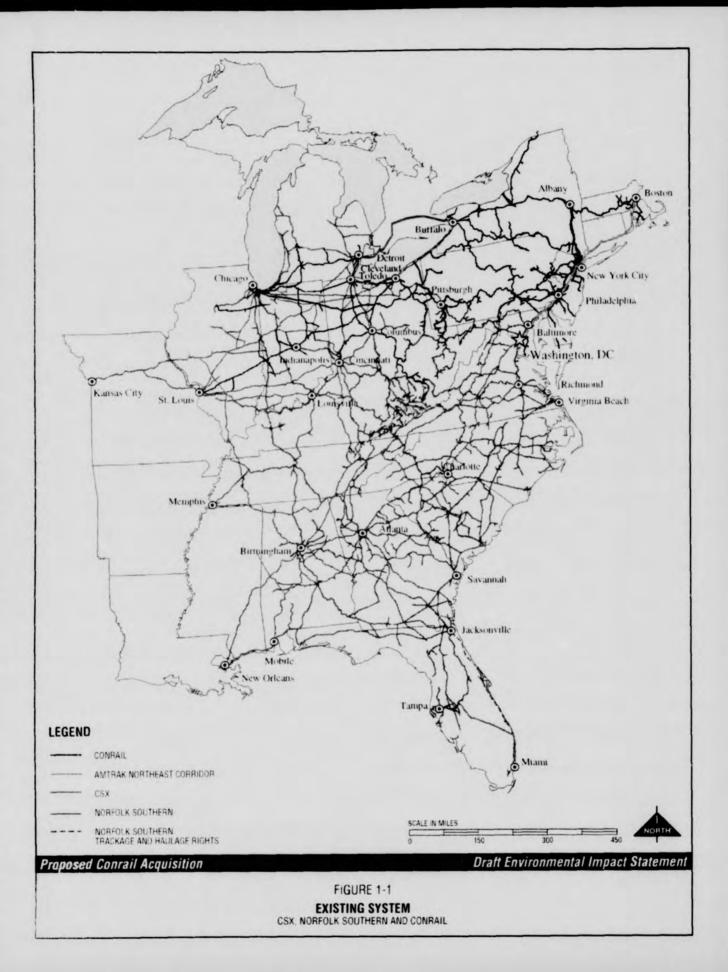
The proposed Conrail Acquisition involves over 44,000 miles of rail lines and related facilities owned by these railroads, covering a large portion of the eastern United States. At the present time, CSX operates approximately 18,500 route miles of rail line in 19 states, the District of Columbia, and the Province of Ontario, Canada. The expanded CSX system would consist of approximately 23,700 route miles. NS presently operates approximately 14,300 route miles of rail line in 19 states and the Province of Ontario. The expanded NS system would be composed of approximately 21,100 route miles. Conrail currently operates approximately 10,500 route miles of rail line in 13 states, the District of Columbia, and the Province of Quebec, Canada. If the proposed Conrail Acquisition is approved and implemented, 514 miles of track would remain in the Conrail system and would be operated as Shared Assets Areas. (See Figures 1-1 and 1-2.)

CSX and NS separately considered acquiring Conrail in 1996 and early 1997. In March 1997, the two companies announced a joint plan to acquire control of Conrail and divide most of its assets while sharing ownership and operation of Shared Assets Areas. CSX and NS then entered into an agreement, and on April 7, 1997, CSX and NS notified the Board of their intent to file a joint application. As noted above, CSX, NS, and Conrail filed their Application on June 23, 1997. This Application included Operating Plans and an Environmental Report describing the physical and operational changes that would be associated with the proposed transaction and the potential environmental impacts of those changes. The Applicants also submitted corrected and supplemental information in the Errata and Supplemental Environmental Report filed with the Board on August 28, 1997, and have provided and continue to provide additional environmental information.

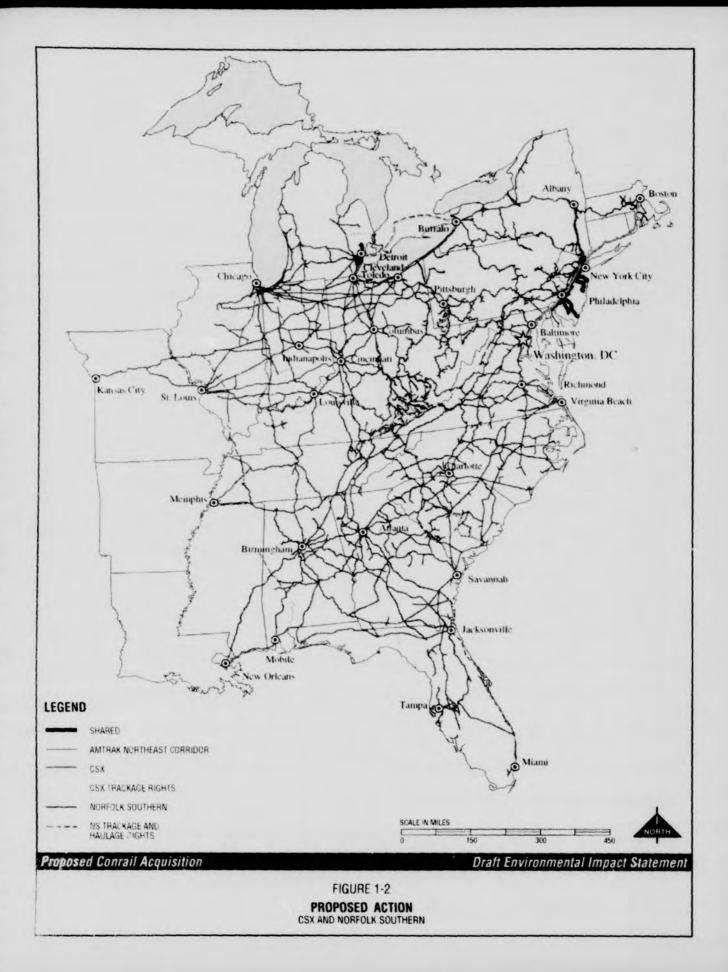
The proposed Conrail Acquisition would increase or decrease rail traffic on some rail line segments as well as in some rail yards. The proposed diversion of highway truck shipments to the expanded CSX and NS systems would result in a decrease in long-haul truck-traffic, although there could be increased local truck traffic in and around new and existing intermodal facilities. The rerouting and consolidation activities associated with the proposed Conrail Acquisition include certain rail line abandonment and rail line construction projects as well as construction and/or expansion of certain rail yards and intermodal facilities. Chapter 2, "Proposed Action and Alternatives" includes a more detailed description of the anticipated changes that would result from the proposed Conrail Acquisition.

#### 1.1.2 Purpose of and Need for the Proposed Conrail Acquisition

According to CSX and NS, the purpose of the proposed Acquisition of Conrail is to provide a more efficient rail transportation system in the eastern United States and to increase rail competition in the Northeast. The Applicants state that there currently is a lack of competition in much of the commercial area now served by Conrail. They maintain that a well-managed rail network, configured in response to market forces, would increase competitive options for shippers and yield substantial efficiencies and corresponding benefits to the shipping public. Further, the Applicants claim that there is a benefit to the public when railroads spread their fixed



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costs over a broader traffic base because the per unit costs of shipping freight declines. Another benefit to the public, cited by the Applicants, is that the proposed Acquisition would result in a substantial reduction of costly and time-consuming interchange of traffic that now slows operations as freight moves through the existing Conrail, CSX, and NS systems.

CSX and NS state that they expect competition will continue in their existing areas of freight service, while competition will increase in geographic areas in which Conrail is currently the only major railroad. CSX and NS each would continue to use its existing rail lines, except that the ownership of an existing NS line from Fort Wayne, Indiana, to Chicago, Illinois, would switch to CSX, with NS having trackage rights permitting it to operate over that line. CSX and NS each would operate certain Conrail rail lines independent of the other, and would operate jointly on certain other Conrail rail lines in Shared Assets Areas located in Detroit, southern New Jersey/Philadelphia and northern New Jersey. A description of the operating plans associated with the proposed Conrail Acquisition is included in Section 2.2, "The Proposed Action."

#### 1.2 SURFACE TRANSPORTATION BOARD REVIEW

#### 1.2.1 Role of the Surface Transportation Board

The Board is an independent, Federal agency with jurisdiction over certain surface transportation matters. The Board was established pursuant to the Interstate Commerce Commission Termination Act of 1995 (ICCTA). The ICCTA eliminated the Interstate Commerce Commission (ICC) and transferred certain rail regulatory functions of the ICC to the Board, including the licensing of rail mergers and acquisitions. (See 49 U.S.C. 11321-11327, formerly 49 U.S.C. 11341-51.) In its review of railroad mergers and acquisitions, the Board takes into account economic, competitive, and environmental considerations. The Board can approve a transaction as proposed; disapprove the transaction; or approve the transaction with conditions, including environmental conditions, to offset or reduce the potential impacts of the proposed transaction.

#### 1.2.2 Review of the Merits of the Proposed Transaction

The Board is required by statute (49 U.S.C. 11323-11325) to approve and authorize a proposed rail acquisition when it finds the transaction is consistent with the public interest. In making this determination, the Board considers the economic and competitive merits of the proposed transaction in accordance with requirements at 49 U.S.C. 11324. That section requires the Board, when deciding whether to approve railroad control transactions and/or impose conditions, to consider:

1. The effect of the proposed transaction on the adequacy of transportation to the public.

- The effect on the public interest of including, or failing to include, other rail carriers in the area involved in the proposed transaction.
- 3. The total fixed charges that result from the proposed transaction.
- 4. The interest of railroad employees affected by the proposed transaction.
- 5. Whether the proposed transaction would have an adverse effect on competition among railroads in the affected region or in the national rail system.

The Board has established a process for receiving comments and alternate proposals related to the economic and competitive impacts. This process is separate from the environmental review process, which provides specific opportunities for the public to comment on environmental effects. The Board's procedural schedule for the proposed Conrail Acquisition and the time frames for SEA's environmental review schedule are detailed in Table 1-1.

#### 1.2.3 Role of SEA and its Independent Third-Party Contractors

The Board's Section of Environmental Analysis (SEA) is responsible for conducting the environmental review of the proposed Conrail Acquisition on behalf of the Board. In conducting this review, SEA engages independent, third-party contractors to provide assistance with environmental analysis and the preparation of environmental documents. The use of agency-approved, independent third-party contractors is specifically permitted by both the Board's environmental regulations and those of the Council on Environmental Quality (49 CFR 1105.10(d) and 40 CFR 1506.5(c), respectively).

In the proposed Conrail Acquisition, as in all Board proceedings where a third-party contractor is retained, the independent third-party contractors' scope of work, approach, and activities are under the sole supervision, direction, and control of SEA. The contractors, in effect, are an extension of SEA's staff. They work under SEA's direction to conduct independent environmental analysis, develop appropriate environmental methodologies, documentation, and mitigation options, and verify the environmental information provided by the railroads, consulting agencies, and all other interested parties. The third-party contractors assisted SEA in compiling the information and conducting the analysis for this Draft EIS.

After reviewing all the public comments received on this Draft EIS, conducting additional environmental analysis, reviewing all other available environmental information, and consulting with appropriate agencies and commenters, SEA, with the assistance of the independent thirdparty contractors, will then prepare a Final EIS. Throughout the EIS process for this project, SEA's involvement, oversight, guidance, and participation has been and will continue to be exclusive and extensive.

DAY	ACTION	DATE	
	Applicants file Preliminary Environmental Report with SEA	May 16, 1997	
Day 1	Applicants file Rail Control Application and Environmental Report	June 23, 1997	
	The Board issues Notice of Intent to Prepare an Environmental Impact Statement and Scoping Notice	July 7, 1997	
	Public and government agencies file comments on the Draft Scope of the Environmental Impact Statement	August 6, 1997	
Day 60	Other Applicants file descriptions of Inconsistent and Responsive Applications	August 22, 1997	
	Applicants file Preliminary Draft Environmental Assessments (PDEAs) for the Seven Construction Projects referenced in Decision No. 9	September 5, 1997	
	SEA issues Final Scope of the Environmental Impact Statement	October 1, 1997	
Day 100	Other applicants file Responsive Environmental Reports and Verified Environmental Statements for any Inconsistent and Responsive Applications	October 1, 1997	
	SEA issues EAs for the Seven Constructions	October 7, 1997	
Day 120	Other applicants file Inconsistent and Responsive Applications	October 21, 1997	
	Public comments due on the EAs for the Seven Constructions	October 27, 1997	
Day 150	Board issues Notice of Acceptance of the Inconsistent and Responsive Applications	November 20, 1997	
	Board issues Decision allowing Seven Constructions to proceed.	November 27, 1997	
	Applicants file Safety Integration Plans	December 3, 1997	
Day 175	Responses to the Inconsistent and Responsive Applications and rebuttals in support of Primary Application due to the Board	December 15, 1997	
	SEA issues Draft Environmental Impact Statement to the public	Mid-Late December 1997	
Day 205	The Board considers rebuttals supporting Inconsistent and Responsive Applications	January 21, 1998	
	Public comments on Draft Environmental Impact Statement due to the Board	February 1998	
Day 245	All parties submit briefs	March 2, 1998	
	SEA issues Final Environmental Impact Statement to the public and the Board	Late May 1998	
Day 346	The Board conducts oral arguments	June 4, 1998	
Day 350	Board conducts Voting Conference	June 8, 1998	
Day 395	Board issues final written decision	July 23, 1998	
	Administrative Appeals Filing Deadline	August 13, 1998	

Table 1-1 Board's Procedural and SEA's Environmental Review Schedule\*

<sup>a</sup> Environmental due dates are approximate.

#### 1.2.4 The Board's Jurisdiction to Impose Conditions

The Board's authority over mergers and acquisitions, such as the proposed Conrail Acquisition, includes the power to impose conditions, including environmental conditions. (See 49 U.S.C. 11324(c).) However, as a government agency, the Board's authority to impose conditions is not limitless. The administrative record must show the need for the condition. There must be a direct relationship between the condition imposed and the transaction before the Board, and the condition imposed must be reasonable. These considerations apply to all conditions imposed by the Board, including environmental conditions to mitigate potentially adverse environmental impacts.

In developing environmental mitigation conditions, the Board has consistently focused on the environmental impacts that result directly from the proposed merger or acquisition such as anticipated increases in rail traffic on existing rail lines. The Board, like its predecessor, the ICC, is without authority to mitigate environmental or other effects resulting from pre-existing conditions such as existing railroad operations or land development in the vicinity of the railroads. Also, absent a licensing proceeding before the Board, an existing railroad can increase its level of operations and make improvements to its rail lines without permission from the Board and without limitation. Accordingly, if the Applicants had not filed this Application with the Board, each of the railroads could have increased on its own the number of trains on its rail lines to any level it considered appropriate.

#### **1.3 OVERVIEW OF THE ENVIRONMENTAL REVIEW PROCESS**

#### 1.3.1 Environmental Review Process

The Board's decision to grant or deny the proposed Conrail Acquisition is a major federal action requiring environmental review under the National Environmental Policy Act (NEPA). NEPA requires the completion of this environmental review process before the Board can issue a final decision on this project. In conducting this environmental review, the Board considers the requirements of NEPA, other related environmental laws and their implementing regulations, and the Board's own environmental rules at 49 CFR Part 1105.

NEPA requires that a Federal agency prepare an environmental impact statement (EIS) if the project that it is licensing has the potential for significant environmental impact. The EIS identifies potential environmental impacts, analyzes these impacts, considers alternatives to the proposed transaction, and develops mitigation measures to avoid or reduce anticipated effects on the environment. The Board has determined that the preparation of an EIS is warranted in this case. The Board based this determination on the nature and scope of environmental issues (for example, safety, intercity passenger and commuter rail service) that were likely to arise as a result of this project.

The preparation of an EIS is a multi-step process. The first step in this process is the preparation of a draft scope of the EIS for public review and comment. In July 1997, SEA issued a draft scope of the EIS, published in the *Federal Register*, and distributed it to approximately 1,900 agencies and individuals for a 30-day comment period. After reviewing the comments and all information available to date, SEA issued a final scope of the EIS on October 1, 1997, which was distributed to over 2,000 agencies and individuals and published in the *Federal Register*.

This Draft EIS contains SEA's analysis of the potential environmental impacts of the proposed Conrail Acquisition, and SEA's preliminary recommendations for environmental mitigation. In preparing this document, SEA reviewed and verified information provided by the Applicants. This information included the Applicants' Environmental Report, Operating Plans, and Application filed on June 23, 1997; the Errata to the Environmental Report and Supplemental Environmental Report submitted on August 28, 1997; and other supplemental environmental information provided by the Applicants. Also, SEA considered all the public comments received to date. SEA consulted with appropriate government agencies, including the Federal Railroad Administration (FRA) and the Environmental Protection Agency (EPA). In addition, SEA conducted independent environmental analyses, including numerous site visits.

As required by the Council on Environmental Quality (CEQ) regulations at 40 CFR 1506.10(c) implementing NEPA, SEA is providing the public with a 45-day period to review and comment on this Draft EIS. This Draft EIS is being served on all parties of record to this proceeding, interested parties, communities, and appropriate Federal, state, and local agencies. In addition, the EPA is publishing a notice of the availability of this Draft EIS in the Federal Register. SEA also prepared a Notice of Availability and distributed it to more than 7,000 interested parties.

After considering all the comments on the Draft EIS, conducting further independent environmental analysis, and consulting with appropriate agencies and communities, SEA will issue a Final EIS. The Final EIS will address the comments on the Draft EIS and will include SEA's final recommendations, including appropriate environmental mitigation. Environmental comments must be received within the 45-day comment period for the Draft EIS in order to be incorporated into the Final EIS. The Final EIS and SEA's final environmental recommendations serve as the basis for the Board's disposition of environmental issues, including the imposition of appropriate environmental conditions.

SEA plans to serve the Final EIS prior to the Board's voting conference, which is scheduled for June 8, 1998. (See Table 1-1, which highlights the Board's 395-day schedule in this proceeding.) At the voting conference, the Board will announce whether it will grant or deny the application, or grant it with appropriate conditions, including environmental mitigation conditions. The Board intends to serve a written decision in this case by July 23, 1998. The Board will consider the Draft EIS and Final EIS, SEA's final recommendations, and all public comments in making its final decision. In that decision, the Board will address both environmental and transportation issues and impose any conditions deemed appropriate.

Proposed Conrail Acquisition

December 1997 Page 1-11 Parties who wish to file an administrative appeal of the Board's written decision (including any environmental conditions that the Board might impose) may do so within 20-days from the service date of the Board's written decision. Any interested party will have approximately two months to consider the Final EIS prior to commencement of the 20-day period for filing administrative appeals. The Board's procedural schedule will provide adequate time to pursue administrative review of the Board's July 1998 decision after it is issued. Any administrative appeals will be addressed in a subsequent decision.

# 1.3.2 Railroad Activities and Environmental Issues to be Analyzed

This Draft EIS describes and analyzes potential environmental impacts resulting from the proposed Conrail Acquisition and recommends appropriate environmental mitigation. Existing rail operations are the baseline against which the potential environmental impacts of the proposed transaction are evaluated. The proposed transaction includes changes in railroad operations such as increases and decreases in train traffic on rail lines, changes in activity at certain rail yards and intermodal facilities, and rail line abandonments and rail line construction projects. In addition, the Draft EIS addresses proposed modifications to the proposed Conrail Acquisition (such as trackage rights or acquisitions of certain rail lines) as requested by other parties in their inconsistent or responsive applications.

In undertaking its environmental review, SEA considered the following options: (1) approval of the Conrail Acquisition as proposed; (2) disapproval of the proposed Conrail Acquisition in whole (No-Action Alternative); and (3) approval of the proposed Conrail Acquisition with conditions, including environmental mitigation measures.

This Draft EIS focuses on the environmental impacts of the proposed Conrail Acquisition. It does not consider competitive or economic issues associated with this project because the Board specifically addresses these issues in considering the merits of the Application. Also, the employees of the consolidating carriers are specifically covered by the statutory labor protection conditions that will be imposed by the Board in considering the merits of this proposed transaction. Accordingly, labor protection is not within the scope of this EIS.

In performing its environmental analysis, SEA considered the potential system-wide, regional, county-wide and local environmental impacts of this proposed Acquisition. The Draft EIS contains an evaluation of the following five types of activities associated with the proposed Conrail Acquisition:

- 1. Anticipated changes in the level of rail traffic on 119 rail line segments meeting or exceeding the Board's thresholds for environmental analysis, as described in Section 1.3.2.
- 2. Proposed construction of 15 new rail line connections and three other facilities (one fueling facility, one intermodal facility, and a bridge rehabilitation).

- Proposed changes in activity at 23 intermodal facilities meeting or exceeding the Board's thresholds for environmental analysis.
- 4. Proposed changes in activity at 15 rail yards meeting or exceeding the Board's thresholds for environmental analysis.
- 5. Four proposed abandonments (three rail line segments and one bridge).

SEA also reviewed the potential environmental impacts resulting from the Inconsistent and Responsive Applications submitted to the Board. SEA evaluated impacts if these applications included activities that meet or exceed the Board's thresholds, such as trackage rights or rail line acquisitions.

In analyzing these five types of activities and the Inconsistent and Responsive Applications, SEA evaluated potential environmental impacts in the following areas:

- Safety.
- Transportation systems.
- Energy.
- · Air quality.
- Noise.
- Cultural and historical resources.
- Hazardous materials.
- Natural Resources.
- Land use, including potential environmental impacts on Native American reservations and sacred sites.
- Socioeconomic effects directly related to physical changes in the environment.
- Environmental justice.

In conducting its environmental review, SEA has also analyzed cumulative environmental effects where such effects could have regional or system-wide impacts, including air quality and energy. SEA has also analyzed cumulative effects for other projects or activities related to the proposed transaction if SEA determined that there is a likelihood of significant environmental impacts and

where certain information was provided in a timely fashion to the Board. This information included a description of the projects, their interrelationship to the proposed transaction, and the type and severity of the potential environmental impacts.

# 1.3.3 Environmental Impact Thresholds

The Board's environmental rules at 49 CFR 1105.7(e) set forth several thresholds that trigger the Board's environmental review. (See Table 1-2.) Where appropriate, SEA used these thresholds to determine which activities associated with the proposed Conrail Acquisition required analysis in the Draft EIS.

Activity/Site	Air Quality Attainment Areas*	Air Quality Nonattainment Areas*	Noise
Rail Line Segments	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.
Rail Yards	Increase of 100% in carload activity per day.	Increase of 20% in carload activity per day.	Increase of 100% in carload activity per day.
Intermodal Facilities	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.

 Table 1-2

 Surface Transportation Board's Thresholds for Environmental Analysis

\* Attainment areas and nonattainment areas as defined by the Clean Air Act.

For example, if a rail line segment located in an attainment area under the Clean Air Act would experience an increase in rail traffic of at least 100 percent (measured in gross ton miles annually) or an increase of at least eight trains a day as a result of the proposed transaction, SEA evaluated the potential environmental impacts associated with the increase in rail traffic. In circumstances where the Board's regulations do not specifically provide a threshold, the Draft EIS generally applies increases of eight trains a day or more or a 100 percent increase in annual gross ton miles as the threshold for addressing environmental impacts.

# 1.3.4 Related Actions

Normally, when SEA conducts its environmental review for mergers and acquisitions, it does not evaluate the environmental impacts of constructions and other activities that take place

wholly within existing railroad right-of-way. For example, SEA does not evaluate incidental construction activities such as normal maintenance work, minor track construction, or rehabilitation work within existing right-of-way. Also, because the Board does not have jurisdiction over the construction, operation, or abandonment of "spur, industrial, team, switching or side tracks," SEA does not review these activities. (See 49 U.S.C. 10906.) Other improvements on existing railroad right-of-way such as "double tracking" (construction of a second track to perform activities that can already be performed over existing track) also do not require a license from the Board and therefore are not ordinarily subject to environmental review.

SEA, however, has concluded that, to ensure a thorough environmental review of the proposed Conrail Acquisition, certain activities, even if they would occur solely within the existing railroad right-of-way, should be reviewed in this EIS. Specifically, SEA reviewed such projects if: (1) they were major undertakings; (2) they would not be undertaken but for the proposed Conrail Acquisition; and (3) they had the potential for environmental impacts outside the existing right-of-way. These projects included certain bridge, intermodal, and rail yard construction and expansion.

#### Seven Early Rail Line Constructions

On May 2, 1997, CSX and NS requested special consideration for seven new rail line connection construction projects totaling approximately four miles of new track (Seven Constructions). Specifically, CSX and NS asked the Board to consider the approval of these Seven Constructions separately from, and prior to, the Board's decision on the proposed Conrail Acquisition. The Board allowed separate review of only the physical construction of the seven connections, subject to certain conditions. The Board required separate environmental reviews of the physical construction of each of the Seven Constructions. If SEA determined that any one of the construction proposals could potentially cause or contribute to significant environmental impacts, then that project would be incorporated into this EIS for the overall proposed transaction. Also, no rail operations can begin over these Seven Constructions until SEA completes the EIS process for the proposed Conrail Acquisition and then only if the Board issues a decision approving the proposed Conrail Acquisition. The environmental impacts of the operational changes for the proposed Conrail Acquisition as a whole, including operations over the Seven Constructions, are assessed in this Draft EIS. (For a detailed discussion of the Board's rationale and the specific environmental review process for the Seven Constructions see Board Decision No. 9 in Appendix T.)

# 1.3.5 Inconsistent and Responsive Applications

Inconsistent and Responsive (IR) Applications are proposals by other parties requesting modifications or alternatives to the proposed Conrail Acquisition. These proposals typically include requests for trackage rights or acquisition of particular rail lines. Under the Board's procedural schedule, parties who planned to file IR Applications were required to file summary

descriptions of their requests (or a petition for a waiver of the requirement) on or before August 22, 1997.

Thirty-one railroads and three commuter rail service providers, ten elected officials and public agencies, two national associations, one employee union, and five businesses filed summary descriptions. Twenty of these entities filed petitions for waiver or clarification of the Board's regulations for IR Applications. The Board, in a series of decisions issued in this proceeding, either clarified the requirements for IR Applications, denied the waiver request, or, in a few instances, waived certain Board requirements for Responsive Environmental Reports. Fifteen IR Applications were filed and accepted by the Board in its Decision No.54 issued on November 20, 1997. The Board considered other filings on October 21, 1997 as comments or Requests for Conditions.

To ensure that it could fulfill its responsibilities under NEPA and other environmental laws, the Board required Inconsistent and Responsive Applicants to file by October 1, 1997, either (1) a Verified Statement that the IR Application would have no significant environmental impact or (2) a Responsive Environmental Report containing detailed environmental information regarding the IR Application.

Fifteen entities filed Verified Statements which cover the IR Applications stating that their proposals do not meet or exceed the Board's environmental thresholds and generally are exempt from environmental review. One IR was filed jointly by two parties that had each filed Verified Statements. SEA reviewed these Verified Statements to ensure that they were sufficient and accepted them as accurate descriptions that there are no environmental impacts anticipated from the IR Applications. These Verified Statements are included in Appendix Q.

If an IR Applicant did not submit a Verified Statement, the Board required the Applicant to submit a Responsive Environmental Report (RER). The RER addresses the environmental issues included in the Board's environmental rules at 49 CFR 1105.7(e). The Board received one RER, which SEA verified and found acceptable. SEA reviewed the RER and has concluded that there are no significant environmental impacts resulting from the Inconsistent and Responsive Applications. The complete RERs are included in Appendix O.

# 1.4 PUBLIC PARTICIPATION AND AGENCY COORDINATION

# 1.4.1 Coordination Activities

As part of the environmental review process, SEA conducted extensive public outreach activities to inform the public about the proposed transaction and facilitate public participation. SEA also consulted with Federal, state, and local agencies, and affected communities to gather and disseminate information about the proposal. In preparing the Draft EIS, SEA considered the information available to date, conducted consultations with government agencies, conducted independent environmental analysis and site visits, and considered the public comments received

so far. With distribution of this Draft EIS, the public has the opportunity to review and comment on the document. SEA will fully consider all public comments submitted within the 45-day comment period. After consideration of all public comments as well as further analysis and consultations, SEA will prepare a Final EIS.

Prior to issuing this Draft EIS, SEA conducted a comprehensive public cutreach effort. On July 3, 1997, a scoping package that included the draft scope of the EIS was distributed to approximately 1,900 Federal, state and local elected and agency officials. In this package, the Board also announced its intent to prepare an EIS and requested comments on the draft scope. On July 7, 1997, SEA published a notice in the *Federal Register* that announce' the Board's intent to prepare an EIS, published the draft scope of the EIS, and requested comments on the proposed scope. In July 1997, a press release detailing this same information was distributed to the media in the 24 affected states, and a legal notice was placed in the newspapers with the highest circulation for each of the potentially affected counties.

In July and October 1997, SEA also prepared and widely distributed a Fact Sheet describing the proposed transaction to approximately 7,000 elected officials, agencies, and organizations for cities and counties potentially affected by the proposed transaction. To further assist SEA in receiving input from the public, SEA established a toll-free environmental hotline (1-888-869-1997), established a website (www.conrailmerger.com), and initiated media monitoring services that involved a weekly review of newspaper articles. SEA also conducted more than 170 site visits to assess local conditions and potential environmental impacts. Additionally, SEA established a comprehensive database to record and maintain all comments received in writing and via telephone and the website.

A final scope of the EIS, reflecting the public comments and clarifying changes, was issued on October 1, 1997. SEA distributed the final scope of the EIS to approximately 2,300 interested parties, including Federal, state and local agencies. More information on SEA's outreach and coordination efforts can be found in Chapter 6, "Agency Coordination and Public Outreach."

#### 1.4.2 Roles of Other Parties

#### Applicants

CSX, NS, and Conrail are joint Applicants in the proposed Conrail Acquisition. In the environmental review process, the Applicants have provided information on existing and proposed railroad operations and anticipated environmental impacts. SEA also consulted with the Applicants and their environmental consultants regarding data verification and information needs, and visited numerous proposed rail line construction and abandonment sites, rail yards, intermodal facilities and rail line segments. If the Board approves the proposed Conrail Acquisition with conditions, including environmental conditions, CSX and NS would be responsible for implementing the conditions imposed by the Board in its approval decision.

#### **Other Agencies**

The Board will exercise its authority with due regard for the jurisdiction and expertise of other Federal agencies. The agencies that are typically most involved in Board proceedings are discussed briefly in the following paragraphs. SEA consulted with these agencies in the course of the environmental review process and provided each with the Draft EIS for their review and comment. SEA will carefully consider their comments in preparing the Final EIS and in making its final recommendations to the Board. (See Chapter 6, "Agency Coordination and Public Outreach," for further details.) More details on the regulatory responsibilities of these Federal agencies are summarized in a table in Appendix N.

**Federal Railroad Administration(FRA)/Department of Transportation(DOT).** The FRA, a part of the Department of Transportation, is the Federal agency with primary responsibility for enforcement of railroad safety. It has promulgated numerous regulations that the Board considers in assessing railroad safety issues and imposing safety conditions in railroad mergers. FRA has issued substantive safety regulations in more than 20 subject areas, and F%A enforces DOT hazardous materials regulations for rail facilities and operations. FRA's regulations at 49 CFR 200-268 cover such topics as dispatching procedures, track safety standards, safe track speeds, train crew hours of service, accident reporting, inspection and testing of train cars, locomotives, and railroad signals. Railroad violations of FRA statutes and implementing regulations for each day the offense continues. FRA is conducting safety evaluations of the Applicants, has provided comments to the Board, and will continue to review railroad safety issues, including the Safety Integration Plans described in Chapter 4.

<u>Council on Environmental Quality (CEQ)</u>. CEQ developed the regulations for implementing NEPA. CEQ also provides clarification and guidance on NEPA regulations, and evaluates existing and proposed policies and activities of the Federal Government involving environmental issues.

Environmental Protection Agency (EPA). EPA has broad oversight and implementing responsibility for many Federal environmental law including the Clean Air Act, Clean Water Act, Comprehensive Environmental Response Compensation and Liability Act, Superfund Amendment and ReauthorizationAct, Toxic Substances Control Act, and Resource Conservation and Recovery Act. EPA also provides guidance and advice in complying with appropriate Executive Orders, including Executive Order 12898 on Environmental Justice, Executive Order 11990 on Protection of Wetlands, and Executive Order 11988 on Floodplain Management. EPA reviews all Draft EISs prepared by Federal agencies and provides comments on the quality of the environmental review. EPA also announces the availability of a Draft EIS in the Federal Register. SEA has consulted with EPA in preparing this Draft EIS and will consider in the Final EIS any EPA comments on the Draft EIS.

U.S. Army Corps of Engineers (the Corps). The Corps is responsible for maintaining and operating certain navigation and flood control projects. In addition, under Section 404 of the Clean Water Act, the Corps is responsible for regulating the discharge of dredge or fill materials into the nation's waters, including wetlands. The agency also regulates, under Sections 9 and 10 of the Rivers and Harbors Act of 1899, activities on navigable waters that could affect the course, location, and capacity of such waters.

<u>U.S. Coast Guard</u>. The Coast Guard has been asked to review this project to ascertain the need for any necessary permits because of changes that might affect navigable waterways of the United States. Any construction involving navigable waterways (for example, new bridges or rehabilitated old structures) would have to meet the Coast Guard's navigational clearance limits or guidelines to avoid obstructions. The Coast Guard also oversees ongoing operations on drawbridges.

Advisory Council on Historic Preservation (ACHP). The Natural Historic Preservation Act (NHPA) requires Federal agencies to consider the effects of its actions on historic and cultural resources. Under NHPA, the Board will consult with the appropriate State Historic Preservation Offices (SHPOs) and ACHP. SEA will provide the Draft EIS to ACHP and the appropriate SHPOs for their review. SEA will ask ACHP to review the discussion in the Draft EIS on possible effects to historic and cultural resources. SEA will continue to consult with SHPOs and other appropriate parties to identify historic and cultural resources and determine whether they will be adversely affected, and, if so, to consider appropriate mitigation.

**U.S. Fish and Wildlife Service (FWS).** FWS is the Federal agency with the primary expertise for fish, wildlife, and natural resources issues. FWS also is responsible for implementing the Endangered Species Act and, through its regional offices, for consulting with other Federal agencies on potential impacts to threatened and endangered species.

The Bureau of Indian Affairs (BIA). BIA administers and manages over 56 million acres of land the Federal government holds in trust for Native Americans. The BIA works with Native American tribes to protect and develop the lands and resources. SEA consulted with the BIA and Native American tribes regarding potential impacts of the proposed Conrail Acquisition on their lands and cultural resources. SEA will provide copies of the Draft EIS to the BIA and potentially affected Native American tribes for their review and comment.

The National Resource Conservation Service (NRCS). This agency, formerly the Soil Conservation Service (SCS), is charged with protecting farmland, particulary those it classifies as prime, unique, or of state or local importance. The NRCS also provides technical assistance to conservation districts, individuals, communities, watershed groups, tribal governments and other agencies on reducing soil erosion and wetland loss. SEA will provide copies of the Draft EIS to NRCS for its review and comment.

**Federal Emergency Management Agency (FEMA).** FEMA determines what constitutes a 100-year floodplain. SEA will provide the Draft EIS to FEMA for its review to ensure compliance with laws, such as the National Flood Insurance Act of 1968 and Executive Order 11988 on National Floodplain Insurance, concerning construction in floodplains.

#### State, Regional, and Local Agencies, and the Public

As previously discussed, SEA seeks and welcomes public comments. SEA has conducted a comprehensive public outreach program to facilitate the public's understanding and participation in the environmental review process for this project. Both SEA and the Board carefully review the public comments in considering the environmental consequences of this project. The list of state and local agencies contacted and a description of public outreach activities are included in Chapter 6, "Agency Coordination and Public Outreach." With this Draft EIS, SEA is presenting and asking for comments on the preliminary results of its analysis of potential environmental impacts of the proposed Conrail Acquisition and preliminary recommended environmental mitigation.

#### 1.4.3 How to Submit Environmental Comments

SEA encourages the public to participate in this proposed Conrail Acquisition project and comment on the Draft EIS during the 45-day comment period. Comments may be submitted to the following address. When submitting comments, please provide one original and ten copies to:

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

Write the following in the lower left hand corner:

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

# CHAPTER 2 Proposed Action and Alternatives

This chapter describes the proposed Conrail Acquisition (the proposed action), the No-Action Alternative and the Approval with Conditions Alternative. Inconsistent and Responsive Applications, which are also evaluated in this Draft Environmental Impact Statement (Draft EIS), are described at the end of the chapter.

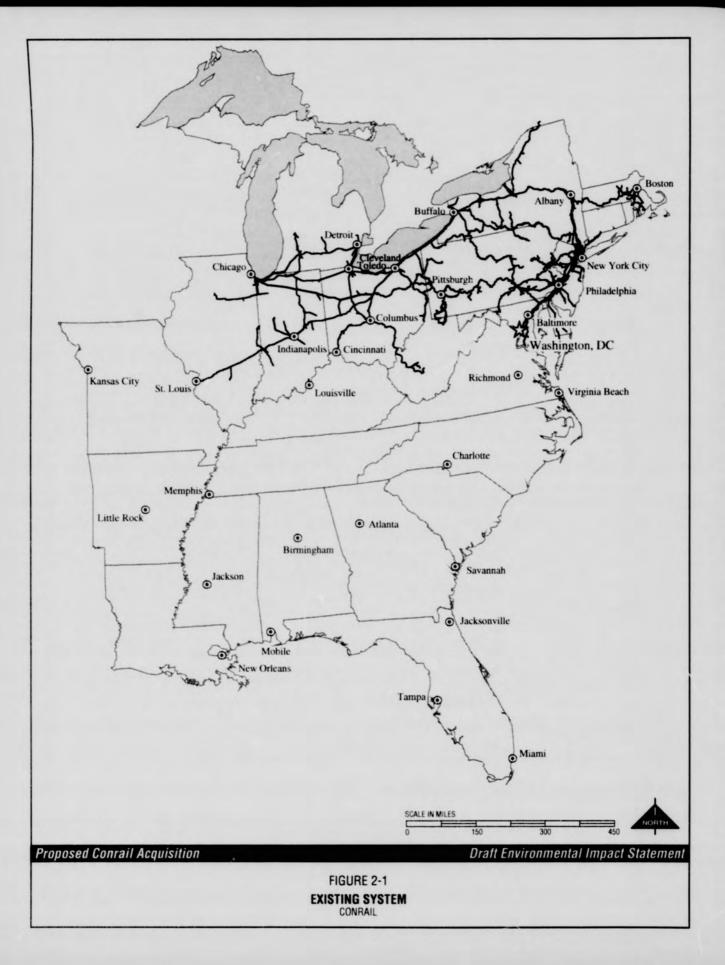
#### 2.1 BACKGROUND AND EXISTING SYSTEMS

The proposed Conrail Acquisition consists of the acquisition and subsequent division of Conrail's assets by CSX and NS. The proposed Conrail Acquisition would result in significant expansion of the current CSX and NS systems. Together, CSX and NS would serve the eastern United States with a total of over 44,000 route miles of rail lines in 24 states, Washington, D.C., and the Canadian Provinces of Ontario and Quebec. Under the proposed Conrail Acquisition, certain Conrail facilities and operations would be acquired and operated individually by either CSX or NS, and certain other existing Conrail facilities and operations would be shared and operated by both CSX and NS.

If approved, the proposed action would result in the rerouting of train traffic over much of the expanded CSX and NS systems. This rerouting would cause increased traffic on some rail segments and decreased traffic on others. The proposed action would also result in changes in activity at certain rail yards and intermodal facilities. Under the proposed action, three rail line segments and one bridge would be abandoned. In addition, CSX and NS propose to construct 15 new rail connections between existing rail lines.

#### 2.1.1 Existing Conrail System

The existing Conrail system, shown in Figure 2-1, includes 11,456 route miles serving 13 states (primarily in the Northeast and Midwest), Washington, D.C., and the Province of Quebec. The Conrail system extends from Chicago, IL and St. Louis, MO in the Midwest to Boston, MA, New York City, NY, Philadelphia, PA, and Baltimore, MD, in the East. In the North, Conrail's service extends from Detroit, MI, Buffalo, NY, and Montreal, Canada to the Mid-Atlantic areas of Washington, D.C., and Charleston, WV. Conrail also provides freight rail service on Amtrak's Northeast Corridor line (from Washington, D.C. to New York City, NY and from New York City



to New Haven, CT). The Conrail system includes intermodal facilities, four of which are currently operated in a joint partnership with NS or its subsidiary, Triple Crown Services (TCS).

#### 2.1.2 Existing CSX System

The existing CSX system, shown in Figure 2-2, operates 18,504 route miles serving 19 states throughout the eastern United States and the Province of Ontario. The current CSX system extends from Chicago, IL, St. Louis, MO, Memphis, TN, and New Orleans, LA, east to Philadelphia, PA, and from Michigan and the Province of Ontario south to Florida and the Gulf Coast. CSX operates a network of intermodal and rail yard facilities.

## 2.1.3 Existing NS System

Norfolk Southern (NS) operates 14,282 route miles serving 18 states and the Province of Ontario. The existing NS system, shown in Figure 2-3, extends from Chicago, IL, Kansas City, MO, Memphis, TN and New Orleans, LA, in the west to Norfolk, VA, and southeastern ports on the Atlantic Coast and from Michigan and the Province of Ontario south to the Gulf Coast. The NS system includes rail yards and intermodal facilities, and the four facilities operated in a joint partnership with Conrail.

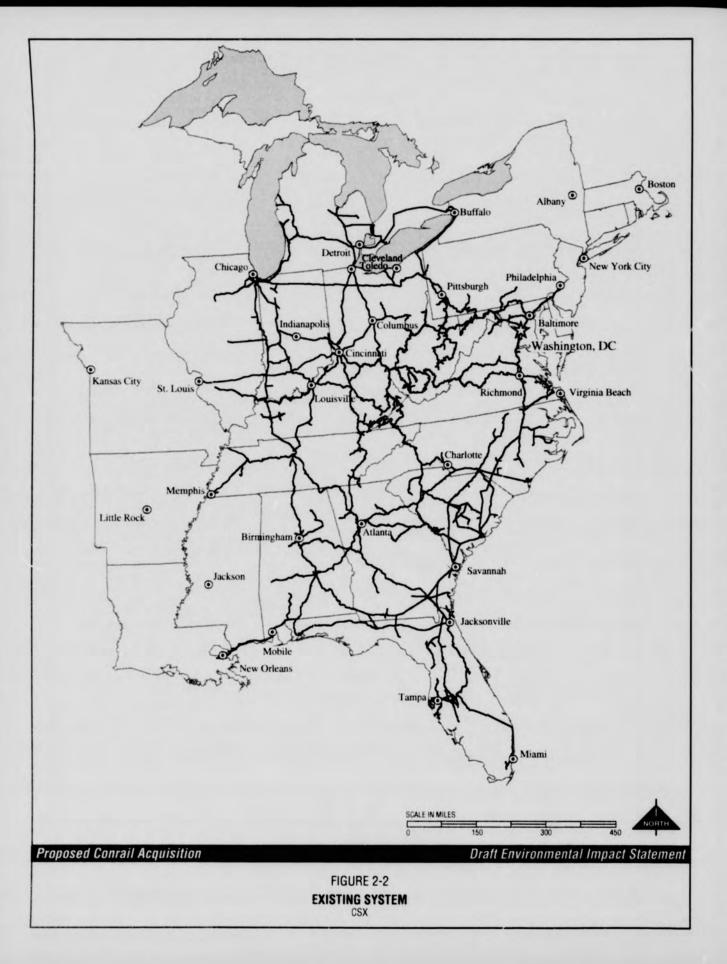
#### 2.1.4 Passenger Rail Systems

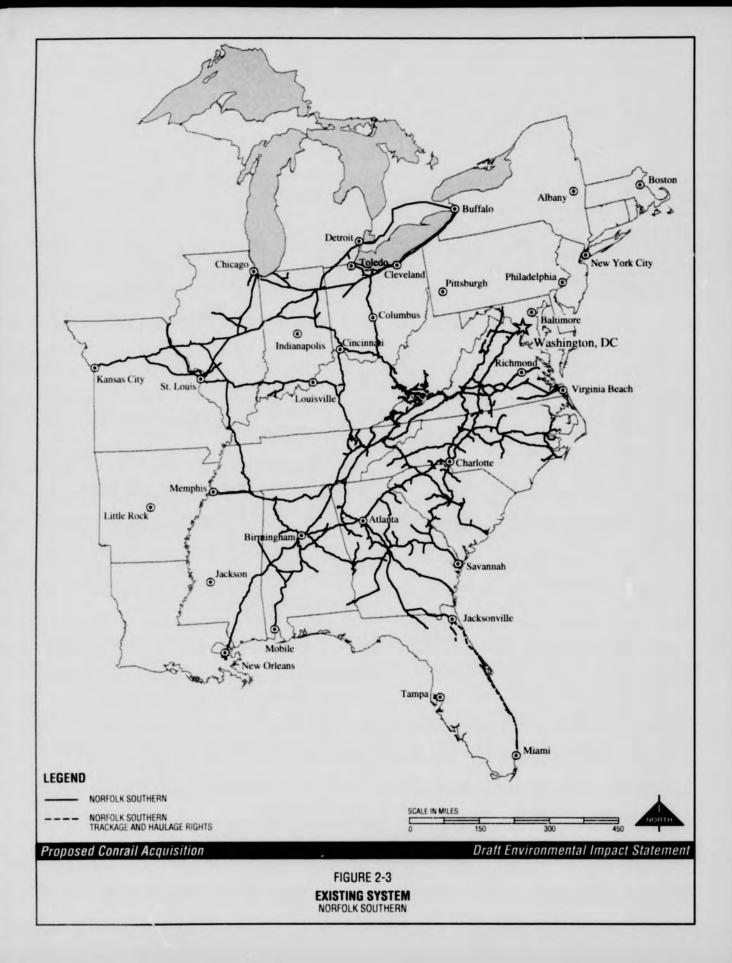
Conrail, CSX, and NS are freight railroads, but share track with passenger rail services in some areas. Two types of passenger rail services are could be affected by the proposed action: Amtrak intercity rail operations and regional transportation agency commuter rail operations. The relationships between passenger rail services and Conrail, CSX, and NS are governed by statutory and contractual agreements which would remain in force if the proposed Conrail Acquisition is approved and implemented.

Amtrak. Amtrak (National Railroad Passenger Corporation) operates approximately 80 intercity trains daily over Conrail, CSX, and NS lines. Conrail operates on lines owned by Amtrak (for example, the Northeast Corridor and Michigan Line). CSX and NS do not operate over Amtrak-owned lines. Current Conrail traffic on Amtrak lines is predominantly local (short haul) in character, except for the segment between Wilmir.gton, DE, and Baltimore, MD, which is through-train traffic.

**Commuter Rail.** Commuter rail service is provided by regional transportation agencies. In six metropolitan areas, commuter rail services operate over Conrail, CSX, or NS lines. These metropolitan areas and agencies are:

- Boston, MA Massachusetts Bay Transportation Authority (MBTA).
- New York/Northern New Jersey Metro North Commuter Railroad (Metro North) and New Jersey Transit (NJT).





- Philadelphia, PA Southeastern Pennsylvania Transportation Authority (SEPTA).
- Baltimore, MD Maryland Rail Commuter (MARC).
- Washington, D.C. MARC and Virginia Rail Express (VRE).
- Chicago, IL Northeast Illinois Railroad Corporation (METRA).

In five metropolitan areas, Conrail, CSX, or NS operate over lines owned by regional commuter rail agencies. These metropolitan areas and agencies are:

- Boston, MA MBTA.
- New York/Northern New Jersey Metro North and NJT.
- Philadelphia, PA SEPTA.
- Chicago, IL METRA.
- Miami, FL Florida Tri-County Commuter Rail Authority (Tri-Rail).

Figure 2-4 shows service areas of commuter rail operating over Conrail, CSX, or NS rail lines, and areas where Conrail, CSX, and NS operate over lines owned by commuter rail agencies. Appendix C details the extent to which these commuter rail agencies and the railroads operate on one another's lines.

# 2.2 THE PROPOSED ACTION

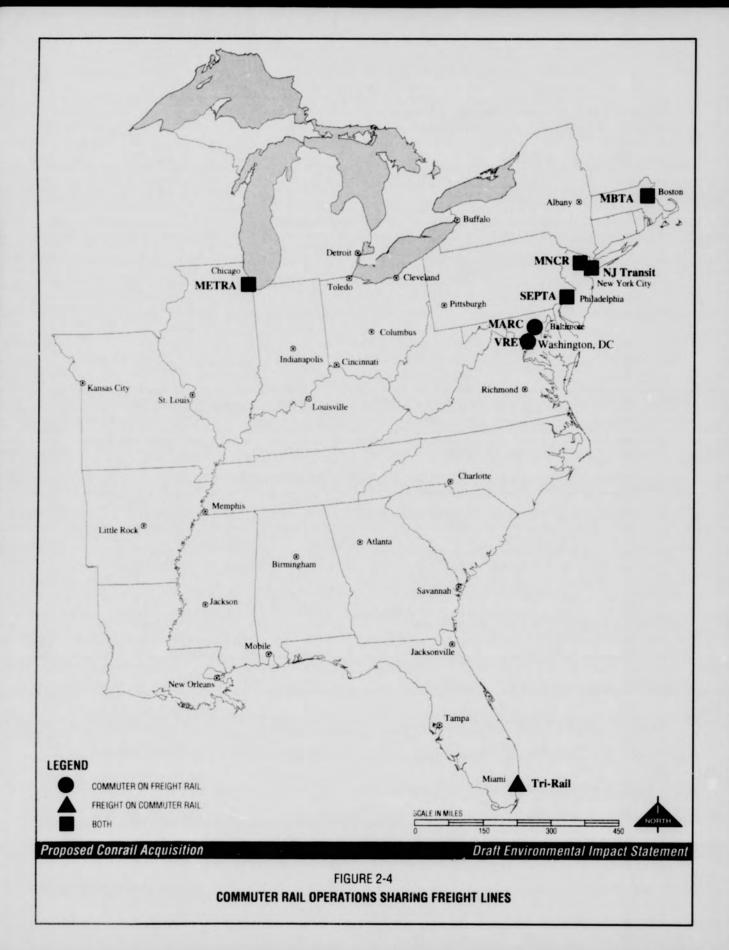
A brief system-wide description of the proposed action is presented below, followed by a listing of the various line segments, rail yards, intermodal facilities, new constructions and abandonments that meet thresholds for environmental analysis. These thresholds are either the Board's regulatory thresholds or those developed specifically for this Draft EIS. (See Section 1.6 for a discussion of the Board's environmental thresholds.)

## 2.2.1 System-Wide Description

The proposed Conrail Acquisition is the acquisition and subsequent division of Conrail's assets by CSX and NS. CSX and NS would jointly own and operate a small portion of Conrail's assets. This would result in two major railroad systems of roughly equal size and scope operating in the eastern United States. CSX and NS would:

- Each continue to operate their own existing rail lines.<sup>1</sup>
- Operate most of the Conrail lines independently of one another.
- Operate the remaining Conrail lines jointly, either as so-called Shared Assets Areas, or under special operating agreements.

<sup>&</sup>lt;sup>1</sup> The exception is the line between Fort Wayne, IN, and Chicago, IL. Ownership of this line would switch from NS to CSX, but NS would have trackage rights.



In the so-called Shared Assets Areas, CSX and NS would establish joint ownership agreements to allow each railroad equal access to customers within defined areas. These Shared Assets Areas are located in Northern New Jersey, Southern New Jersey/Philadelphia, and Detroit, MI. The rail lines in the Shared Assets Areas total about 514 route miles. Figure 2-5 shows the expanded CSX system, and Figure 2-6 shows the expanded NS system. Both figures show the Shared Assets Areas.

Trackage rights and shared use agreements are special operating agreements that would allow CSX and NS to compete directly within certain areas. These areas are in addition to the Shared Assets Areas. They are:

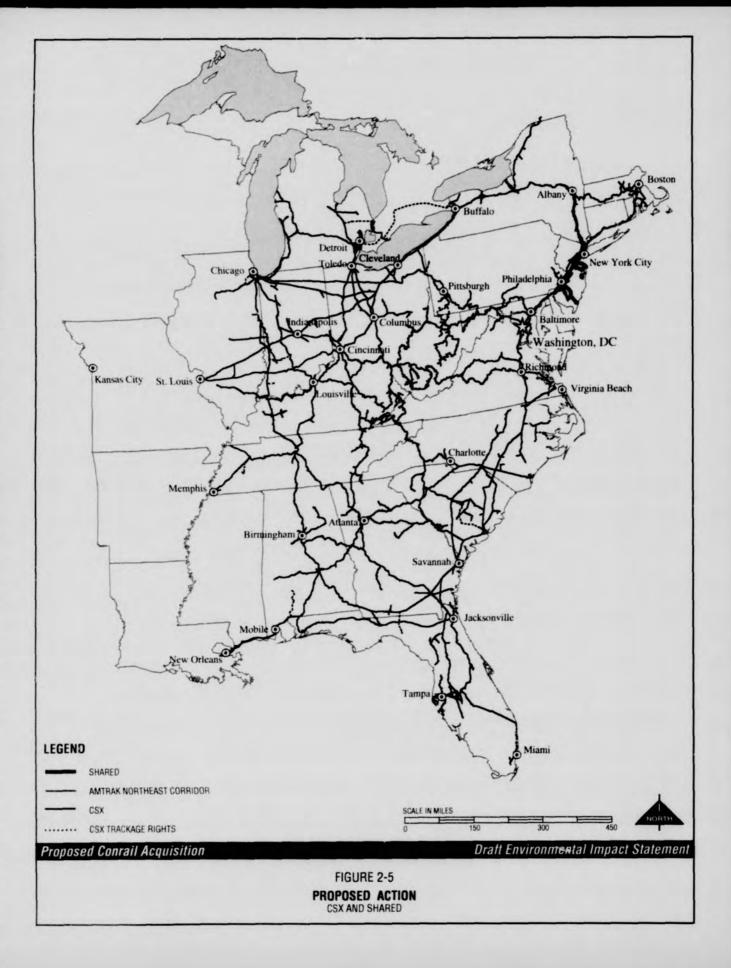
- Indianapolis, IN.
- · The Monongehela Coal Area of southwestern Pennsylvania.
- Ashtabula Harbor on Lake Erie in northern Ohio.

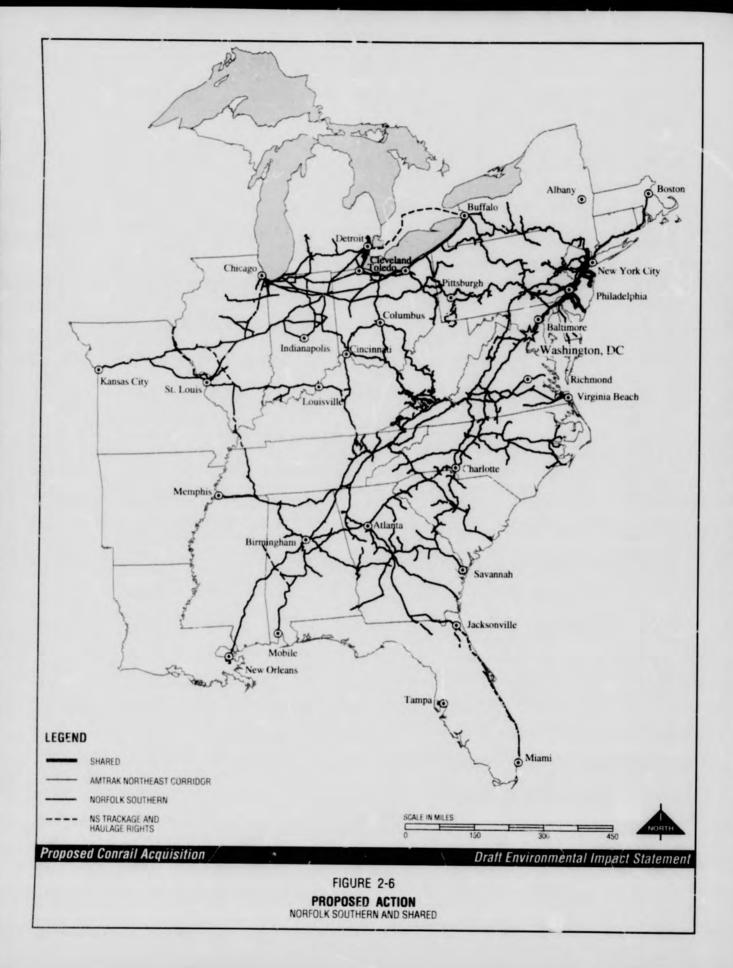
#### **Description of Expanded CSX System**

With approval of the proposed Acquisition, the CSX system (including the Shared Assets Areas) would expand by approximately 4,669 route miles to a total of approximately of 23,713 route miles in 23 states, Washington D.C., and the Provinces of Ontario and Quebec. The Conrail assets proposed for CSX operation are currently located in 10 states, Washington, D.C., and the Province of Quebec.

The expanded CSX system, according to the Application, would serve major markets and ports throughout the eastern United States. The expanded network would enable shippers to use single-line service (which is direct rail transport from source to destination without requiring interchange of rail cars to a connecting railroad) over 11 major service routes, including two alternative routes between New York and Chicago. Single-line service would connect Conrail points in the Northeast to points in the South, Midwest, and Mid-Atlantic regions.

The Applicants state that the expanded CSX system could enhance coast-to-coast service by providing improved single-line service from east coast markets to CSX's four major gateways (those locations where connections are made with railroads carrying freight through the western United States) of Chicago, IL; St. Louis, MO; Memphis, TN; and New Orleans, LA. The expanded CSX system would offer an expanded intermodal network that would compete with truck service in the 1-95 (from Maine to Florida), I-85 (from Virginia to Alabama), I-75 (from Michigan to Tennessee) and I-90 (from Massachusetts west beyond Chicago, IL) highway corridors.





#### Description of Expanded Norfolk Southern System

The expanded NS system (including the Shared Assets Areas) would have approximately 21,069 route miles of rail line in 21 states, Washington D.C., and the Province of Ontario. NS would acquire and operate approximately 6,787 route miles of Conrail's assets in 10 states and Washington D.C. The expanded NS system would serve major markets and ports throughout the eastern United States.

The expanded NS system, according to the Application, would provide enhanced single-line service between points in the Northeast and the Southeast, and along the major trucking corridors of I-85 (from Virginia to Alabama), I-75 (from Michigan to Tennessee), I-81 (from New York to Tennessee), I-70 (from Maryland west to Kansas City, MO), and I-76 (Pennsylvania Turnpike). NS plans new single-line service from Alabama and Tennessee to points in the Northeast.

The Applicants explain that the expanded NS system would offer single-line service between New York and Chicago, IL on two routes, one via Buffalo, NY, and one via Pittsburgh, PA. NS throughservice would serve eight western gateways: Chicago, IL; Kansas City, MO; St. Louis, MO; Memphis, TN; New Orleans, LA; Meridian, MS; Streator, IL; and Peoria, IL.

#### 2.7 2 Scope of the Draft EIS

The proposed Conrail Acquisition would result in comprehensive changes in rail operations for the expanded CSX and NS systems. Changes would occur due to the following types of actions:

- Increases and decreases in rail traffic on numerous rail line segments.
- Construction of 15 new rail line connections<sup>2</sup> (four by CSX and 11 by NS), one intermodal facility, one fueling facility, and one bridge rehabilitation.
- Increases and decreases in activities at certain intermodal facilities.
- Increases and decreases in activities at certain rail yards.
- · Abandonment of three rail line segments and one pivot bridge.

SEA reviewed the data in CSX and NS "Post-Acquisition" operating plans, identifying changes from "Pre-Acquisition" operations. SEA identified those operational changes and planned activities that meet or exceed the Board's environmental thresholds for air quality and noise (at 49 CFR 1105.7) as well as specified thresholds developed by SEA during the scoping process. Through this "threshold screening process," described in detail in Appendices A through K, SEA identified those changes and activities that have been examined in this Draft EIS. Table 2-1 shows which thresholds SEA applied, by activity type and environmental impact category.

<sup>&</sup>lt;sup>2</sup> The Board has conducted separate environmental analyses for seven constructions (three by NS and four by CSX). (See Section 2.4.)

	Environmental	Activitie	es Evaluated for	Potential Envir	onmental In	apacts
	Impact Category	Rail Line Segments	Constructions	Intermodal Facilities	Rail Yards	Abandonments
SA	FETY					
•	Freight Rail Operations	All rail segments with an increase of 8 or more trains per day.	NA	All intermodal facilities.	All rail yards.	NA
•	Passenger Operations	Segments with existing passenger rail traffic with an increase of one or more freight trains per day.	NA	NA	NA	NA
•	Highway/Rai! At-Grade Crossing Safety	All at-grade highway rail crossings on roadways with average daily traffic of 5,000 or more vehicles on segments that meet the Board's environmental thresholds <u>and</u> all crossings on segments with an increase of 8 or more trains per day.	All at-grade highway crossings affected by construction.	NA	NA	All highway/rail at-grade crossings affected by abandonments.
•	Hazardous Materials Transport	All segments with hazardous materials transport.	NA	All intermodal facilities.	All rail yards.	NA
TF	RAFFIC AND TRA	NSPORTATION				
•	Passenger Rail Service	Segments with existing passenger rail traffic with an increase of one or more freight trains per day.	NA	NA	NA	NA

 Table 2-1

 Environmental Impact Analysis Thresholds by Activity Type

	Environmental	Activitie	es Evaluated for	Potential Enviro	onmental Imp	acts
	Impact Category	Rail Line Segments	Constructions	Intermodal Facilities	Rail Yards	Abandonments
•	Roadway Crossing Delay	At-grade highway crossings on segments that meet or exceed the Board's environmental thresholds <u>and</u> with roadway average daily traffic of 5,000 vehicles or greater.	New at-grade highway crossings created by proposed constructions.	NA	NA	At-grade highway crossings on abandoned line segments.
•	Roadway Capacity	NA	NA	Intermodal facilities with an increase of 50 or more trucks per day <u>or</u> 10% increase in average daily traffic on affected roadways.	NA	All abandonments with rail-to-truck diversions.
•	Navigation	Movable-span bridges on segments that meet or exceed the Board's environmental thresholds.	NA	NA	NA	All abandonments with movable-spar bridges.
E	NERGY					
		System-wide analysis of truck-to-rail diversions.	NA	Intermodal facilities that meet or exceed the Board's environmental thresholds.	Rail yards that meet or exceed the Board's environment al thresholds.	All abandonments resulting in rail-to- truck diversions of more than 1,000 rail carloads per year <u>or</u> an average of 50 rail carloads per mile per year for any part of the affected line.

 Table 2-1

 Environmental Impact Analysis Thresholds by Activity Type

Environmental	Activiti	es Evaluated for	Potential Envi	ronmental Im	pacts
Impact Category	Rail Line Segments	Constructions	Intermodal Facilities	Rail Yards	Abandonments
AIR QUALITY					
<ul> <li>Attainment Areas</li> </ul>	Segments with an increase of 8 or more trains per day <u>or</u> at least a 100% increase in annual gross ton miles. For specific emissions thresholds, See Appendix E, "Air Quality"	All constructions.	Intermodal facilities with an increase of 50 or more trucks per day <u>or</u> a 10% increase in average daily traffic on affected roadways.	Rail yards with a 100% or greater increase in carload activity per day.	All abandonments.
• Nonattainment Areas	Segments with an increase of 3 or more trains per day <u>or</u> at least a 50% increase in annual gross ton miles. For specific emissions thresholds, see Appendix E, "Air Quality"	All constructions.	Intermodal facilities with an increase of 50 or more trucks per day <u>or</u> a 10% increase in average daily traffic on affected roadways.	Rail yards with a 20% increase in carload activity per day.	All abandonments.
NOISE	Segments with an increase of 8 or more trains per day <u>or</u> at least 100% increase in annual gross ton miles.		Intermodal facilities with an increase of 50 or more trucks per day <u>or</u> a 10% increase in average daily traffic on affected roadways.	Rail yards with a 100% increase in carload activity per day.	NA
CULTURAL RESOURCES	NA	All constructions.	NA	NA	All abandonments.

 Table 2-1

 Environmental Impact Analysis Thresholds by Activity Type

Environmental	Activities Evaluated for Potential Environmental Impacts										
Impact Category	Rail Line Segments	Constructions	Intermodal Facilities	Rail Yards	Abandonments						
HAZARDOUS WASTE SITES	NA	All constructions.	NA	NA	All abandonments.						
NATURAL RESOURCES	NA	All constructions.	NA	NA	All abandonments.						
LAND USE/ SOCIOECONOMICS	NA	All constructions.	NA	NA	All abandonments.						
ENVIRONMENTAL JUSTICE	All segments that meet or exceed any threshold for environmental impact analysis.	All constructions.	Intermodal facilities that meet or exceed the Board's environmental thresholds.	Rail yards that meet or exceed the Board's environment al thresholds.	NA						

 Table 2-1

 Environmental Impact Analysis Thresholds by Activity Type

NA = Not Applicable

#### Affected Rail Line Segments

Rail line segments are the portions of rail lines that run between two terminals or junction points. The operating plans submitted with the Application describe how CSX and NS each propose to modify their operations over the expanded rail networks and to route traffic to meet customers' freight shipping needs. These modifications would result in train traffic increases on some rail line segments and decreases on others.

SEA identified 119 segments in 14 states and Washington, D.C. that meet or exceed the Board's thresholds for noise or air quality analysis. Tables 2-2, 2-3, and 2-4 list those segments. To evaluate potential impacts on rail safety resulting from the proposed action, SEA analyzed all passenger rail lines that accommodate freight traffic and that would experience an increase of one or more freight trains per day. SEA also evaluated potential safety impacts for all rail segments with any increase in the transport of hazardous materials.

SEA assigned specific numbers to identify each rail line segment, connection, rail yard, intermodal facility, and abandonment analyzed in the Draft EIS. These site identification (Site ID) numbers are referenced on tables in this chapter and throughout the Draft EIS.

					SSENC		Analys F	REIGH	T	1	T	1
		-		-	ins per		_	ins per	_	-	1	
Site ID	Segment Name	Current RR	Miles	Amtrak	Commuter M-F	Commuter Sat/Sun	Pre-Acquisition	Post- Acquisition	Change	Pre-Acquisition Gross Ton Miles/ Year (in millions)	Post-Acquisition Gross Ton Miles/ Year (in millions)	% Change Gross Ton Miles/Year
	ct of Columbia						_		_		-	
	Anacostia - Virginia Ave	CR	2.5	0	0	0	19.3	28.6	9.3	40	45	13%
	Virginia Ave Potomac Yard	CR	6	18.5	26	0	17.9	28.6	10.7	40	48	20%
	Washington DC - Pt. of Rocks	CSX	43	2	17	0	23.8	30.8	7.0	38	56	47%
Illinois												
_	Barr Yd Blue Island Jct.	CSX	3	0	0	0	17	32.9	15.9	25	58	132%
_	Blue Island Jct - 59th Street	CSX	15	0	0	0	19.5	22.9	3.4	27	37	37%
Indian											-	_
_	Adams - Fort Wayne	CR	5	0	0	0	5.9	13.9	8.0	3	19	533%
_	Evansville - Amqui, TN	CSX	137	0	0	0	23.4	32.71	9.31	48	74	0.542
	Ft. Wayne - Warsaw	NS	39.7	0	0	0	2.4	6.4	4.0	4	13	225%
_	Pine Jct Barr Yd.	CSX	11	0	0	0	27.6	33.3	5.7	41	65	59%
	Tolleston - Clark Jct.	CR	3.9	0	0	0	0	5.0	5.0	0	12	
	Vincennes - Evansville	CSX	53	0	0	0	22.3	30.8	8.5	45	78	73%
_	Warsaw - Tolleston	NS	83.1	0	0	0	1.0	5.0	4.0	4	12	200%
	Willow Creek - Pine Jct.	CSX	12	0	0	0	22.1	38.6	16.5	34	70	106%
Maryl		LCOV		-	-		107	242	11	40	51	28%
_	Alexandria Jct Benning	CSX	6	0	0 22	0	18.7 23.9	24.3	5.6	40	56	60%
_	Alexandria Jct Wash. DC Baltimore - Relay	CSX CSX	7	0	22	0	39.6	42.7	3.1	64	70	9%
	Cumberland - Sinns, PA	CSX	133	2	0	0	27.7	32.8	5.1	41	54	32%
	Jessup - Alexandria Jct.	CSX	133	0	22	0	33.4	37.1	3.7	41	70	46%
	Landover - Anacostia, DC	CR	5.4	0	0	0	3.4	9.1	5.7	5	11	120%
_	Pt.of Rocks-Harpers Ferry, WV	CSX	38	2	17	0	33.3	41.6	8.3	58	76	31%
_	Relay - Jessup	CSX	7	0	22	0	33.1	37.0	3.9	46	58	26%
Michi		Con	1	0	44		33.1	57.0	3.9	40	1 30	2070
Contraction of the local sectors of the local secto	Carleton - Toledo, )H	CSX	26.5	0	0	0	21.9	33.1	11.2	40	64	60%
New Y		Con	20.0			1 0	1.1.9	33.1		10	1 04	0070
	Buffalo - CP Sycamore	CR	1.2	0	0	0	13.5	18.5	5.0	16	24	50%
	Chili - Frontier	CR	50.5	7.1	0	0	40.6	45.9	5.3	80	92	15%
	CP Sycamore - Black Rock	CR	6	0	0	0	21.5	26.5	5.0	32	42	31%
	Hoffmans - Utica	CR	66.4	7.4	0	0	38.3	44.8	6.5	76	89	17%
	Selkirk - Hoffmans	CR	25.4	0	0	0	38.7	45.2	6.5	79	88	11%
Ohio		Ten	1						0.0		1 00	
	Ashtabula - Quaker	CR	46.5	2	0	10	48.3	54.2	5.9	103	108	5%
	Berea - Greenwich	CR	42	0	0	0	14.5	54.2	39.7	31	108	248%

# Table 2-2 CSX Rail Line Segments That Meet or Exceed the Board's Thresholds for Environmental Analysis

		resho	as ior	240.00	SSENG	and the second second		REIGH	T	-	-	-
		-		_	ins per			ins per		-	-	-
Site ID	Segment Name	Current RR	Miles	Amtrak	Commuter M-F	Commuter Sat/Srra	Pre- Acquisition	Post- Acquisition	Change	Pre-Acquisition Gross Ton Miles/ Year (in millions)	Post-Acquisition Gross Ton Miles/ Year (in millions)	% Change Gross Ton Miles/Year
C-062	Bucyrus - Adams, IN	CR	113.5	0	0	0	5.9	13.9	8.0	4	19	375%
C-063	Cincinnati - Hamilton	CSX	21	1	0	0	28.2	31.2	3.0	55	64	16%
C-064	Crestline - Bucyrus	CR	11.9	0	0	0	6.5	14.5	8.0	4	19	375%
C-065	Deshler - Toledo	CSX	36	0	0	0	0.6	14.2	13.6	0	50	•
A DECISION OF THE OWNER OWNER OF THE OWNER OWNE	Deshler - Willow Creek, IN	CSX	174	2	0	0	21.4	47.7	26.3	45	94	109%
C-067	Greenwich - Crestline	CR	21.2	0	0	0	14.5	31.3	16.8	31	58	87%
C-068	Greenwich - Willard	CSX	11.6	2	0	0	32.5	55.2	22.7	56	109	95%
C-069	Marcy - Short	CR	8.8	0	0	0	16.4	45.8	29.4	26	95	265%
_	Marion - Fostoria	CSX	40	0	0	0	17.8	27.4	9.6	40	63	58%
C-071	Marion - Ridgeway	CR	23.2	0	0	0	16.1	31.8	15.7	39	51	31%
C-072	Mayfield - Marcy	CR	6	0	0	0	3.4	43.8	40.4	9	93	933%
C-073	Quaker - Mayfield	CR	3	0	0	0	6.8	43.8	37.0	9	93	933%
C-074	Short - Berea	CR	4	0	0	0	13.4	47.3	33.9	15	102	580%
C-075	Willard - Fostoria	CSX	36.8	2	0	0	32.5	54.0	21.5	56	110	96%
Pennsy	ylvania											
C-080	Field - Belmont	CR	4	0	0	0	8.2	15.8	7.6	11	20	82%
C-081	New Castle - Youngstown	CSX	18.3	2	0	0	32.6	39.6	7.0	54	76	41%
C-082	Rankin Jct New Castle	CSX	51	0	0	0	28.9	38.3	9.4	41	72	76%
C-083	RG - Field	CR	2	0	0	0	0	16.0	16.0	0	17	•
C-084	RG - Wilsmere, DE	CSX	26	0	0	0	22.9	26.4	3.5	40	49	23%
C-085	Sinns - Brownsville	CSX	38	0	0	0	1.5	10.8	9.3	2	23	b
	Sinns - Rankin Jct.	CSX	9	2	0	0	30.8	40.2	9.4	40	72	80%
Tenne		-										
C-090	Amqui - Nashville	CSX	16	0	0	0	40.8	48.4	7.6	80	104	30%
Virgin												
	Doswell - Fredericksburg	CSX	37	16	0	0	16.2	22.8	6.6	41	52	27%
	Fredericksburg - Potomac Yd.	CSX	49	16	12	0	16.3	23.4	7.1	40	52	30%
	Richmond - Doswell	CSX	24	16	0	0	17.8	24.8	7.0	44	54	23%
C-103	S. Richmond - Weldon	CSX	82	10	0	0	18.4	23.0	4.6	47	56	19%
West V	Virginia	-										
C-110	WD Tower - Rivesville	CSX	4	0	0	0	1.5	3.4	1.9	4	7	75%

Table 2-2 CSX Rail Line Segments That Meet or Exceed the Board's Thresholds for Environmental Analysis

<sup>a</sup> not applicable (cannot divide by zero)

<sup>b</sup> greater than 1000%

#### Table 2-3

# NS Rail Line Segments That Meet or Exceed the Board's

Thresholds for Environmental Analysis

		-		PA	SSEN	GER			FRE	IGHT		
			1	Tra	ains per	r Day	Tra	ins per			1	
Site ID	Segment Name	Current RR	Miles	Amtrak	Commuter M-F	Commuter Sat/Sun	Pre- Acquisition	Post- Acquisition	Change	Pre-Acquisition Gross Ton Miles/ Year (in millions)	Post-Acquisition Gross Ton Miles/ Year (in millions)	% Change Gross Ton Miles/Year
Alabam												
N-001 1	Norris Yard - Attalla	NS	48	0	0	0	7.4	12.5	5.1	20	23	15%
Delawa	re											
N-010	Edgemoor - Bell	CR	1	0	0	0	5.0	11.8	6.8	5.1	13.5	165%
Georgia												
	Howell - Spring	NS	1	0	0	0	33.3	40.4	7.1	67.5	81.4	21%
	Spring - Scherer Coal	NS	65	0	0	0	27.2	32.9	5.7	60.8	67.7	11%
Illinois												
N-030	IC 95 St - Pullman Jct	NS	1	0	0	0	2.0	5.9	3.9	4.8	13.4	179%
N-032	Taylorsville - Granite City	NS	77	0	0	0	10.0	15.0	5.0	17.1	19.4	13%
N-033	Tilton - Decatur	NS	71	0	0	0	22.7	39.1	16.4	29.2	47.9	64%
N-034	Colehour - Calumet Park	CR	5	0	0	0	1.1	2.5	1.4	3.6	8.1	125%
Indiana												
N-040	Alexandria - Muncie	NS	16	0	0	0	2.6	11.8	9.2	5.6	26.3	370%
N-041	Butler - Ft. Wayne	NS	28	0	0	0	13.6	27.3	13.7	16.8	33.4	99%
N-042	CP 501 - Indiana Harbor	CR	1	14	0	0	43.4	60.3	16.9	85.9	128.9	50%
N-043	Ft. Wayne TC - Ft. Wayne Yard	NS	2	0	0	0	6.6	9.6	3.0	3.1	7.2	132%
	Ft. Wayne - Peru	NS	53	0	0	0	19.0	34.9	15.9	23.3	46.7	100%
	Lafayette - Tilton, IL	NS	49	0	0	0	23.6	41.0	17.4	29.8	53.6	80%
	Peru - Lafayette	NS	53	0	0	0	18.4	40.2	21.8	23.9	50.8	113%
N-047	Indiana Harbor - South Chicago	CR	8	16	0	0	57.1	61.2	4.1	81.3	114.1	40%
Michiga												
	Jackson - Kalamazoo	CR	67	8	0		5.4	12.0	6.7	7.8	20.4	162%
N-121	West Detroit - Jackson	CR	74	8	0		2.9	12.1	9.2	4.8	19.8	313%
New Jer	rsey											
N-050	Ridgewood Jct - Croxton	NJT	17	0	64		4.7	7.9	3.2	14.8	22.3	51%
New Yo	rk											
	Corning - Geneva	CR	57	0	0	0	0.2	1.6	1.4	0.2	1.2	500%
N-061	Ebenezer Jct Buffalo	CR	5	0	0	0	0.0	11.4	11.4	0	18.7	1
	Suffern - Campbell Hall	CR	35	0	16	0	4.7	7.7	3.0	8.2	16.1	96%
	Campbell Hall - Port Jervis	CR	30	0	16	0	7.9	12.0	4.1	14.4	22.4	56%
	Suffern - Ridgewood Jct., NJ	CR	11	0	0	0	7.6	10.6	3.0	23.2	51.8	123%
	Corning - Buffalo	CR	128	0	0	0	13.6	20.6	7.0	22.8	29	27%
Ohio												
	Ashtabula - Buffalo	NS	127	0	0	0	13.0	25.2	12.2	17.6	38.8	120%
	Bellevue - Bucvrus	NS	34	0	0	0	26.0	34.6	8.6	58.3	81.2	39%
	Bellevue - Vermilion	NS	26	0	0	0	15.6	27.0	11.4	30.6	50.1	64%
	Bucyrus - Fairgrounds Col	NS	61	0	0	0	26.0	34.3	8.3	54.2	76.3	41%

#### Table 2-3 NS Rail Line Segments That Meet or Exceed the Board's Thresholds for Environmental Analysis

		reshold			SSENC	and the second			FRE	GHT		
-					ins per		Trai	ins per	Day			
Site ID	Segment Name	Current RR	Miles	Amtrak	Commuter M-F	Commuter Sat/Sun	Pre-Acquisition	Post- Acquisition	Change	Pre-Acquisition Gross Ton Miles/ Year (in millions)	Post-Acquisition Gross Ton Miles/ Year (in millions)	% Change Gross Ton Miles/Year
CARL STOR COLOR STOR	Cleveland - Shortline Junction	CR	7	0	0	0	2.0	4.0	2.2	0.7	11.5	b
N-075	Cleveland - Ashtabula	NS	50	0	0	0	13.0	36.6	23.6	19.9	62.4	214%
	Ivorydale - Cincinnati	NS	6	0	0	0	33.9	38.6	4.7	49.6	65	31%
	Oak Harbor - Miami	CR	22	4	0	0	48.0	61.5	13.5	99.9	120.3	20%
N-078	Dayton - Ivorydale	CR	48	0	0	0	11.7	18.9	7.2	24.3	34.9	44%
	Oak Harbor - Bellevue	NS	27	0	0	0	7.7	27.2	19.5	49	184	276%
N-080	Vermilion - Cleveland	NS	37	0	0	0	13.5	34.1	20.6	25.5	46.2	81%
N-081	White - Cleveland	CR	11	2	0	0	12.5	29.7	17.2	25.9	59.9	131%
N-082	Youngstown - Ashtabula	CR	59	0	0	0	11.7	23.8	12.1	31	54.5	76%
N-084	Alliance - White	CR	46	2	0	0	26.4	30.1	3.7	57.5	60.3	5%
N-085	Bellevue - Sandusky Docks	CR	15	0	0	1 0	1.4	11.7	10.3	5.9	14.1	139%
N-086	Miami - Airline	CR	2	4	0	0	55.4	64.0	8.6	112.4	123	9%
Penns	vlvania											
N-090	Harrisburg - Rutherford	CR	6	0	0	0	44.3	57.9	13.6	85.8	89.6	4%
	Harrisburg - Riverton Jct. VA	NS	133	0	0	0	11.1	19.6	8.5	18.5	33.7	82%
	Harrisburg - Marysville	CR	9	4	0	0	42.4	49.1	6.7	85.2	100.6	a second s
N-093	Harrisburg - Shocks	CR	22	0	0	0	2.2	6.0	3.8	2.8	6.8	143%
N-094	WM Jct - Rutherford	CR	45	0	0	0	42.4	49.7	7.3	86.8	91	5%
N-095	Rochester, PA - Youngstown	CR	39	0	0	0	12.6	17.7	5.1	31.8	37.1	17%
Virgin	nia											
	Riverton Jct Roanoke	NS	181	0	0	0	3.9	12.1	8.2	8.8	28.9	228%
West '	Virginia											
_	Elmore - Deepwater	NS	60	0	0	0	0.3	2.3	2.0	0.5	6.3	b
	Fola Mine - Deepwater	CR	17	0	0	0	0.6	2.0	1.4	1.3	5.6	331%

\* not applicable (cannot divide by zero)

<sup>b</sup> greater than 1000%

1

				PAS	SENG	ER			FR	EIGHT		
				Train	s per D	ay	Tra	ins per	Day			
Site ID	Segment Name	Current RR	Miles	Amtrak	Commuter M-F	Commuter Sat-Sun	Pre-Acquisition	Post- Acquisition	Change	Pre-Acquisition Gross Ton Miles/Year (in millions)	Post Acquisition Gross Ton Miles/Year (in millions)	% Change Gross Ton Miles/Year
Dela	ware											
S-1	Davis - Perryville, MD	Amtrak	21.1	73	0	0	4.5	12.4	7.90	26	45	73%
Mar	land											
S-10	Baltimore - Bowie	Amtrak	28.6	73	44	0	2.4	7.7	5.30	25	37	48%
S-11	Bowie - Landover	Amtrak	8.3	73	44	0	3.2	9.3	6.10	29	43	48%
Mich	igan											
S-20	Carleton - Ecorse	CR	20	0	0	0	2	11.2	9.20	1	15	b
S-21	W. Detroit - North Yard	CR	6.7	0	0	0	7.9	13.2	5.30	6	14	133%
S-22	W. Detroit - Delray	CR	2.4	0	0	0	12.7	16.5	3.80	11	17	55%
New	Jersey					_						
S-30	Lane - Union	Amtrak	7.1	93/67 *	184	88	3.4	11.0	7.60	59	76	29%
S-31	Midway - Morrisville, PA	Amtrak	17.3	93/67 *	82	48	3.4	11.0	7.60	37	54	46%
	PN - Bayway	CR	9.1	0	0	0	10.9	16.2	5.30	10	16	60%
S-33	Union - Midway	Amtrak	21.6	93/67 *	96	48	3.4	11.0	7.60	41	58	41%
Penn	sylvania											
S-40	Arsenal - Davis, DE	Amtrak	25	73/58 ª	58	30	2.3	10.5	8.20	28	46	64%
S-41	Morrisville - Zoo	Amtrak	28.5	93/67 ª	52	36	3.4	7.1	3.70	33	41	24%
	South Philadelphia - Field	CR	5	0	0	0	8.2	21.1	12.90		25	317%

# Table 2-4 Shared Assets Rail Line Segments That Meet or Exceed the Board's Thresholds for Environmental Analysis

\* Weekend

<sup>b</sup> Greater than 1,000%

#### Constructions

SEA analyzed a total of 18 Acquisition-related construction projects:

- 15 new rail-line connections.
- · One intermodal facility.
- One fueling facility.
- One bridge rehabilitation.

CSX and NS plan to construct 15 new connections between existing rail lines to provide shorter, more direct routing between various origin and destination points over the expanded CSX and NS systems. For example, NS plans to construct a connection between existing NS and Conrail tracks which cross one another in Butler, IN; this would create a new direct through-traffic route from NS's Detroit, MI, line to the Conrail Chicago, IL, line that NS would acquire. CSX proposes to construct four new connections, and NS proposes to construct 11. One of the proposed CSX connections and five of the proposed NS connections would require the acquisition of additional rights-of-way. SEA evaluated the potential environmental impacts of the construction and operation of the 15 proposed new connections. SEA also considered site-specific alternatives to the proposed connections. Table 2-5 lists the CSX new connections, and Table 2-6 lists the NS new connections.

1	Table 2-5	
<b>Proposed</b> Ne	w Connections -	- CSX

State	Site ID	Location (city)	County	Length (feet)
Illinois	CC01	75th Street, Chicago	Cook	1,640
	CC02	Exermont	St. Clair	3,590
	CC03	Lincoln Avenue, Chicago	Cook	840
New Jersey	CC04	Little Ferry*	Bergen	1,080

<sup>a</sup> Two separate connections (600 and 480 feet in length) are planned at Little Ferry.

State Site ID		Location (City)	County	Length (feet)	
Illinois	NC01	Kankakee	Kankakee	1,000	
	NC03	Tolono	Champaign	1,600	
Indiana	NC05	Butler	De Kalb	1,700	
	NC06	Tolleston	Lake	900	
Maryland	NC07	Hagerstown	Washington	800	
Michigan	NC08	Ecorse Junction	Wayne	400	
New York	NC09	Buffalo (Blasdell)	Erie	5,200	
	NC10	Buffalo (Gardenville Junction)	Erie	1,700	
Ohio	NC12	Columbus	Franklin	1,400	
	NC13	Oak Harbor	Ottawa	5,000	
	NC14	Vermillion	Erie	5,400	

Table 2-6 Proposed New Connections - NS

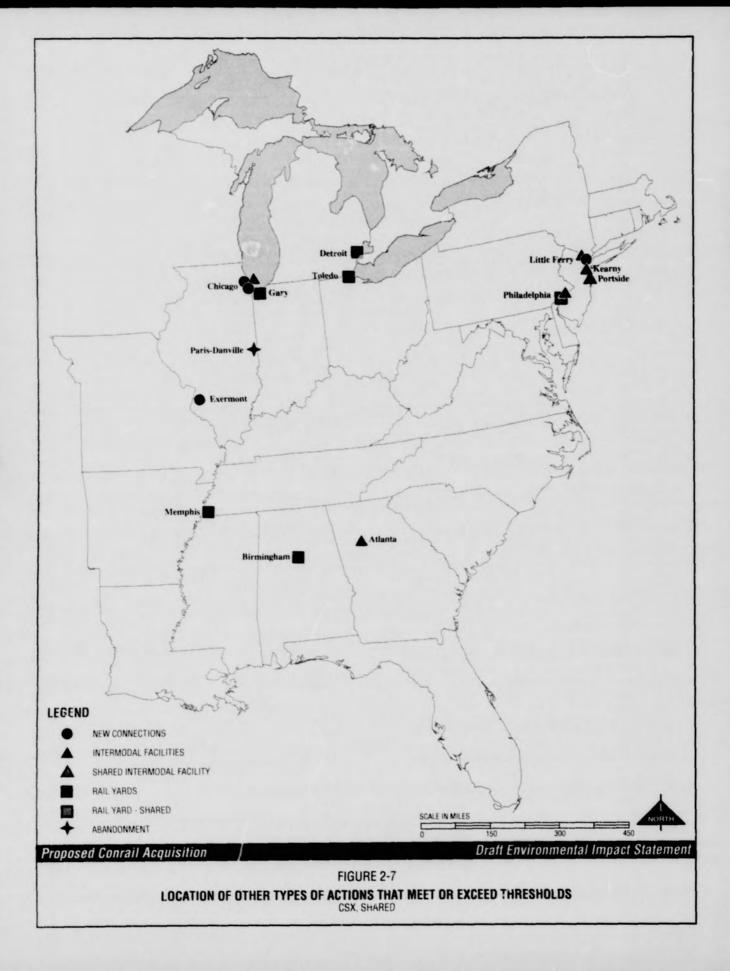
In addition, a part of the Collinwood Yard in Cleveland, OH, would be converted to an intermodal facility, a new fueling facility would be built at the Willard Yard in Ohio, and the Shellpot Bridge in Wilmington, DE, would be rehabilitated. These related actions are discussed in Section 2.3. Figures 2-7 and 2-8 show proposed new connections as well as the intermodal facilities, rail yards, and abandonments discussed below.

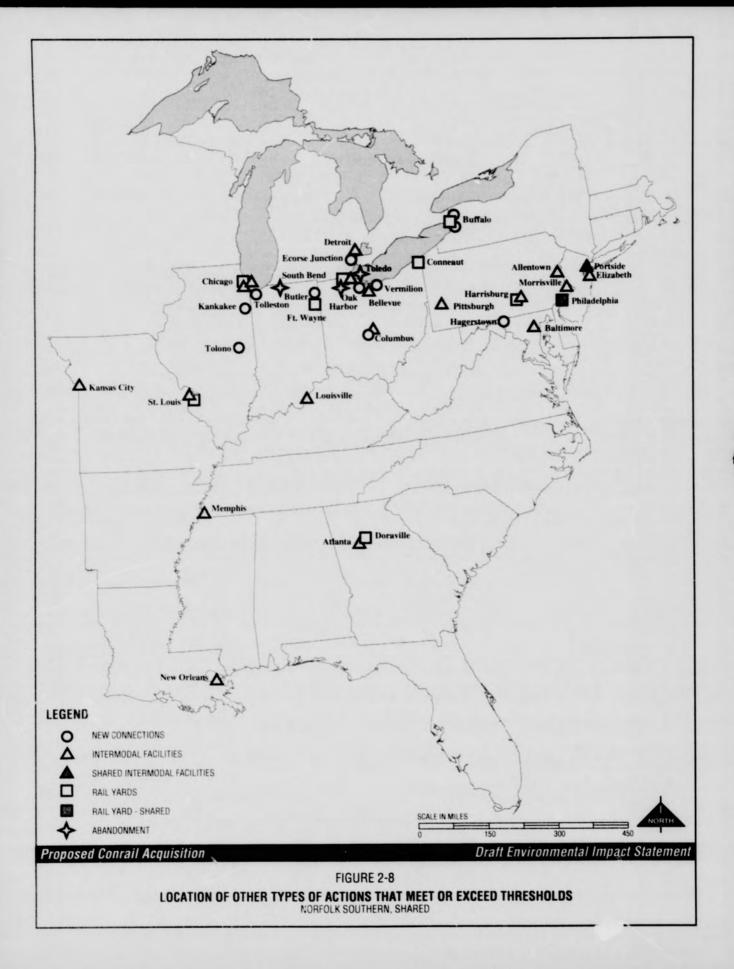
#### Affected Intermodal Facilities

Intermodal facilities are areas where truck trailers and/or containers are transferred between trains and trucks or ships. Intermodal operations combine the local delivery capability of trucks with the long-haul efficiency of rail transport and ocean carriers. There are two basic types of intermodal facilities, flat car and Triple Crown Services (TCS). Flat car facilities use lift equipment (like cranes) to move trailers and containers onto or off of rail cars and trucks. TCS facilities use a technology that transfers trailers between rail and trucks without using lifts. Currently, NS is the primary user of TCS technology.

The proposed action would result in substantial truck-to-rail diversions. There would be increased local truck traffic near the interme dal facility, but decreased long-haul truck traffic on interstates and regional roadways.







If the proposed Conrail Acquisition is approved and implemented, CSX would have 34 intermodal facilities, NS would have 47 intermodal facilities, and they would share 12 facilities. SEA evaluated the CSX and NS operating plans and determined that 23 intermodal facilities in 11 states would experience traffic increases that meet or exceed the Board's thresholds for environmental analysis. SEA assessed the environmental effects of increased operations at these intermodal facilities. Table 2-7 lists the CSX intermodal facilities, Table 2-8 shows the NS intermodal facilities, and Table 2-9 shows the Shared Assets Areas Intermodal Facility which is studied in this Draft EIS.

Table 2-7
Intermodal Facilities that Meet or Exceed the Board's Thresholds for Environmental Analysis - CSX
Ior Environmental Analysis - Cox

State	Site ID	Location (City)	Facility	County	Current Owner	Trucks per Day		
						Pre-Acquisition	Post- Acquisition	Change
Georgia	CM01	Atlanta	Hulsey	Fulton	CSX	523	603	80
Illinois	CM02	Chicago	59th Street	Cook	CR *	0	815	815
New Jersey	СМ03	Little Ferry	Little Fen y	Bergen	CSX	215	392	177
	СМ04	South Kearny	South Kearny	Hudson	CR	410	488	78
Pennsylvania	CM05	Philadelphia	Greenwich	Philadelphia	CR <sup>b</sup>	0	272	272

New intermodal facility to be built on property currently owned by Conrail.

Existing rail yard to be converted to an intermodal facility.

						Tru	cks per	Day
State	Site ID	ite ID (City) Facility County Own	Current Owner	Pre-Acquisition	Post-Acquisition	Change		
Georgia	NM01	Atlanta	Inman	Fulton	NS	569	712	143
Illinois	NM02	Chicago	Landers	Cook	NS	412	507	95
	NM03	Chicago	47th Street	Cook	CR	532	737	205
Kentucky	NM04	Louisville	Buechel	Jefferson	NS	119	173	54
Louisiana	NM05	New Orleans	Oliver	Orleans	NS	64	127	63
Maryland	NM06	Baltimore	E. Lombard St.	Baltimore	CR, TCS*	108	200	92
Michigan	NM07	Detroit	Melvindale	Wayne	NS, TCS	257	314	57
Missouri	NM08	Kansas City	Voltz	Clay	NS, TCS	229	349	120
	NM09	St. Louis	Luther	St. Louis	NS, TCS	188	382	194
New Jersey	NM10	Elizabeth	E-Rail	Union	CR, TCS	72	407	335
Ohio	NMII	Bellevue*	Bellevue	Erie, Huron	NS, TCS	0	65	65
	NM12	Columbus	Discovery Park	Franklin	NS	131	184	53
Pennsylvania	NM14	Allentown	Allentown	Lehigh	CR	39	138	99
	NM15	Harrisburg	Rutherford	Dauphin	CR, TCS <sup>b</sup>	68	398	330
	NM16	Morrisville	Morrisville	Bucks	CR, TCS <sup>b</sup>	164	347	183
	NM17	Pittsburgh	Pitcairn	Allegheny	CR	0	114	114
Tennessee	NM18	Memphis	Forrest	Shelby	NS	120	196	76

Table 2-8 Intermodal Facilities That Meet or Exceed the Board's Thresholds for Environmental Analysis - NS

NS had planned to move its TCS facility from Crestline, OH, to Bellevue, OH. In October 1997, NS notified SEA that this intermodal facility would be moved to Sandusky, OH, (Erie County) rather than Bellevue. SEA is analyzing the environmental effects of this revised relocation plan and will document all impacts in the Final EIS.

<sup>b</sup> New intermodal facility to be built on property currently owned by Conrail (CR).

					Т	rucks per Da	ay	
State	Site ID	Location (City)	Facility	County	Current Owner	Pre-Acquisition	Post-Acquisition	Change
New Jersey	SM01	Elizabeth	Portside	Union, Essex	CR, TCS	26	76	50

Table 2-9 Intermodal Facility that Meets or Exceeds the Board's Thresholds for Environmental Analysis - Sbared Assets Areas

Conrail, CSX, and NS currently serve a combined total of 17 ports on the Atlantic and Gulf coasts and 27 ports on the Great Lakes and inland waterways. The operating plans of CSX and NS do not include proposed changes to service to any ports. Therefore, SEA has not assessed the potential impacts on port activity.

## Affected Rail Yards

The primary activity at rail yards is the switching and sorting of rail cars as trains are assembled and disassembled. Other activities include locomotive maintenance and fueling, and freight car inspection, cleaning and repair. Rail yards vary in size from small support yards with just a few tracks to very large classification yards, more than a mile in length, with dozens of tracks. The current Conrail, CSX, and NS systems have a combined total of several hundred rail yards.

SEA analyzed the proposed changes at rail yards that would result from the proposed Acquisition and determined that 15 rail yards in 10 states would have activity increases that would meet or exceed the Board's thresholds for environmental analysis. This Draft EIS evaluates the potential environmental impacts from increased activities at these rail yards. CSX rail yards meeting the Board's thresholds are listed in Table 2-10, and NS rail yards meeting the Board's thresholds are shown in Table 2-11. Table 2-12 shows the rail yard in the Shared Assets Areas that meets the Board's thresholds for environmental analysis.

#### Abandonments

As part of the proposed action, CSX and NS plan to abandon three rail line segments and one bridge (with a combined total of 58.2 route miles) because operating and maintaining these rail line segments would no longer be efficient or economical.

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State Site					Rail	Cars Han	dled per	Day
	Site ID	ID Location (City)	Facility	County	Pre-Acquisition	Post-Acquisition	Increase	Percent Change
Alabama	CY01	Birmingham	Boyles	Jefferson	990	1186	196	20%
Indiana	CY02	Gary	Curtis	Lake	110	145	35	32%
Michigan	CY03	Detroit	Rougemere	Wayne	335	585	250	75%
Ohio	CY04	Toledo	Stanley	Wood	876	1282	406	46%
Tennessee	CY05	Memphis	Leewood	Shelby	120	153	33	28%

Table 2-10

Rail Yards That Meet or Exceed the Board's Thresholds for Environmental Analysis-CSX

 Table 2-11

 Rail Yards that Meet or Exceed the Board's Thresholds for Environmental Analysis - NS

					Rail C	Cars Ha	ndled p	er Day
State	Site ID	Location (City)	Facility	County	Pre-Acquisition	Post-Acquisition	Increase	Percent Change
Georgia	NY01	Doraville	Doraville	DeKalb	174	222	48	28%
Illinois	NY02	Chicago	Colehour	Cook	74	94	20	27%
Indiana	NY03	Ft. Wayne	Ft. Wayne	Allen	283	583	300	106%
Missouri	NY04	St. Louis	Luther	St. Louis	239	327	88	37%
New York	NY05	Buffalo	Bison	Erie	389	672	283	73%
Ohio	NY06	Conneaut	Conneaut	Ashtabula	30	74	44	147%
	NY07	Toledo	Homestead	Lucas	326	469	143	44%
	NY08	Toledo	Airline Jct.	Lucas	0	520	520	•
Pennsylvania	NY09	Harrisburg	Harrisburg	Dauphin	117	246	129	110%

\* Not applicable (cannot divide by zero).

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			Rail Cars Handled per Day					
State	Site ID	Location (City)	Facility	County	Pre-Acquisition	Post-Acquisition	Increase	Percent Ciange
Pennsylvania	SY01	Philadelphia	Greenwich	Philadelphia	265	501	236	89%

Table 2-12 Rail Yards that Meet or Exceed the Board's Thresholds for Environmental Analysis - Shared Assets Areas

CSX proposes to abandon one rail line (currently owned by Conrail) from Paris, IL, to Danville, IL, that is approximately 29 miles long. (See Table 2-13.) After the proposed abandonment, traffic currently moving on this line would be rerouted to CSX's nearby Danville, IL, to Evansville, IN, line. There are no local shippers on this line.

Table 2-13 Proposed Abandonments - CSX

State	Site ID	From	То	Length in Miles
Illinois	CA01	Paris	Danville	29.0

NS proposes abandoning two rail lines (one of each in Indiana and Ohio) and one rail bridge (in Ohio), totaling approximately 29.2 miles. (See Table 2-14.) Through-traffic on these lines would be rerouted to more direct and efficient routes within the NS system. Four local shippers (who collectively ship a total of 90 rail carloads per year) on two of these rail line segments would lose rail service and would require truck service. No other rail-to-truck diversions would result from these abandonments.

Table 2-14 Proposed Abandonments - NS

State	Site ID	From	То	Length in Miles
Indiana	NA02	South Bend	Dillon Junction	21.5
Ohio	NA03	Toledo	Maumee	7.5
Ohio	NA04	Toledo (pivot bridge)		0.2

SEA evaluated the potential environmental impacts of the four proposed abandonments in this Draft EIS.

# 2.3 RELATED ACTIONS

CSX and NS propose to complete various other actions related to the proposed Conrail Acquisition. In the Environmental Report and Operating Plans, CSX and NS identified several additional actions needed for effecting the proposed Conrail Acquisition; these actions are typically small-scale, routine, and do not ordinarily require approval from the Board.

SEA reviewed a total of 75 projects identified by CSX and NS as being other related actions. The projects involve planned improvements to existing railroad facilities to address capacity and clearance needs and are primarily upgrades or extensions of existing rail sidings on existing rail beds within the railroad right-of-way. Other projects proposed by CSX and NS involve operational improvements, such as upgrading signals and other non-structural improvements.

None of these related actions would require the Board's approval but for this proposed Acquisition. Moreover, some of these actions are speculative; these improvements may never be made, even if the proposed Acquisition is approved and implemented. However, because the projects clearly are directly related to the proposed action and could contribute to an overall cumulative impact, SEA decided to consider available information on these projects in this Draft EIS. Specifically, SEA reviewed each project to determine the potential 'so individual or cumulative environmental impacts.

SEA conducted a qualitative assessment of the scope of each project and the likelihood of its implementation, reviewed available project area information, discussed existing conditions with persons knowledgeable of the sites, and visited selected sites. Each project was then rated as to its potential for significant environmental impact that might extend beyond the existing right-of-way. SEA determined that further analysis was appropriate for three expansion or renovation projects.

SEA collected additional data for the three projects listed in Tables 2-15 and 2-16 and shown in Figure 2-9. These projects are discussed as constructions in appropriate discipline- and site-specific sections in Chapter 5 of this Draft EIS. SEA determined that the remaining projects were minor, routine actions with only minor and  $\frac{16}{2}$  nporary potential impacts and no potential for significant environmental effects outside of exir ingright-of-way. Therefore, SEA determined that the projects did not require further analysis.

State	Site ID	Location (City)	County	Action
Ohio	CR03	Collinwood, Cleveland	Cuyahoga	Expand existing yard to accommodate intermodal facility
Ohio	CR04	Willard	Huron	Expand existing yard

Table 2-15 Related Actions - CSX

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Delator	d Actions - NS
Related	Actions - Inc

T.L. 9 1/

State	Site ID	Location (City)	County	Action
Delaware	NR01	Wilmington	New Castle	Shellpot Bridge renovation

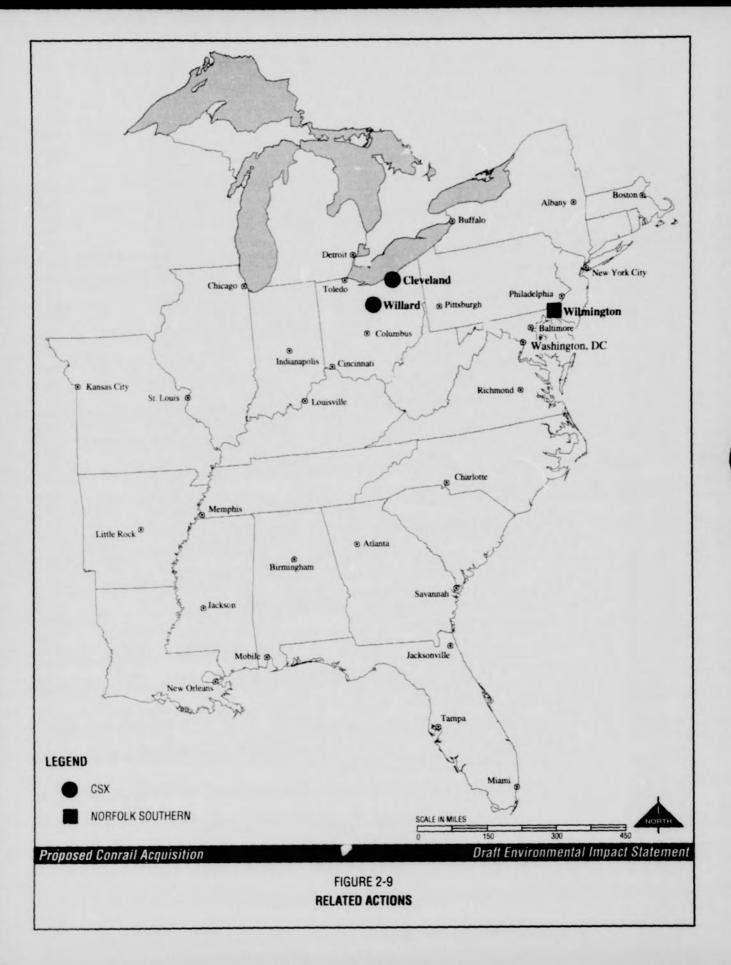
# 2.4 SEVEN CONSTRUCTION PROJECTS

CSX and NS petitioned the Board for a waiver to allow the early construction of seven rail line connections (four by CSX and three by NS) prior to a Board decision on the proposed Conrail Acquisition. These Seven Constructions total less than four miles of new track. (See Table 2-17 and Figure 2-10.) CSX and NS contended that these connections need to be in place prior to the Board's decision on the proposed action so that, if the Application is approved, CSX and NS would be able to immediately provide efficient services in competition with one another. CSX and NS assume the risk that the Application may be denied and/or they will not be able to operate over one or more of the new connections. After considering the railroads' waiver requests and the comments submitted by other interested parties, the Board granted the waiver petitions.<sup>3</sup>

State	Site ID	Location (City)	County	Length in Feet
CSX				
Indiana	CX05	Willow Creek	Porter	2,800
Ohio	CX07	Crestline	Crawford	1,507
	CX06	Greenwich	Huron	5,644
	CX08	Sidney	Shelby	3,263
NS				
Illinois	NX02	Sidney	Champaign	3,200
Indiana	NX04	Alexandria	Madison	1,000
Ohio	NXII	Bucyrus	Crawford	2,400

Table 2-17 Seven Construction Projects

<sup>3</sup> Surface Transportation Board Decision Number 9 - June 12, 1997



In granting the waiver petitions, the Board ensured that there would be a full environmental review of each of the seven connections; the Board required CSX and NS to prepare a Preliminary Draft Environmental Assessment for each proposed early construction. SEA then independently verified the information contained in the Preliminary Draft Environmental Assessments, conducted further environmental analysis as needed, and developed possible appropriate mitigation measures. SEA then prepared and issued an Environmental Assessment (EA) for each of the projects for public review and comment. Based on these EAs and public comments, SEA presented to the Board its findings that the Seven Constructions, with the recommended environmental mitigation, will not have a significant impact on the environment. After considering public comments and SEA's recommendation, the Board issued a decision <sup>4</sup> allowing constructions to begin. The potential environmental effects of operations over these Seven Constructions is considered as part of the analysis of the associated rail line segments, as described in Chapters 4 and 5 of this Draft EIS. Figure 2-10 shows the locations of the Seven Construction projects.

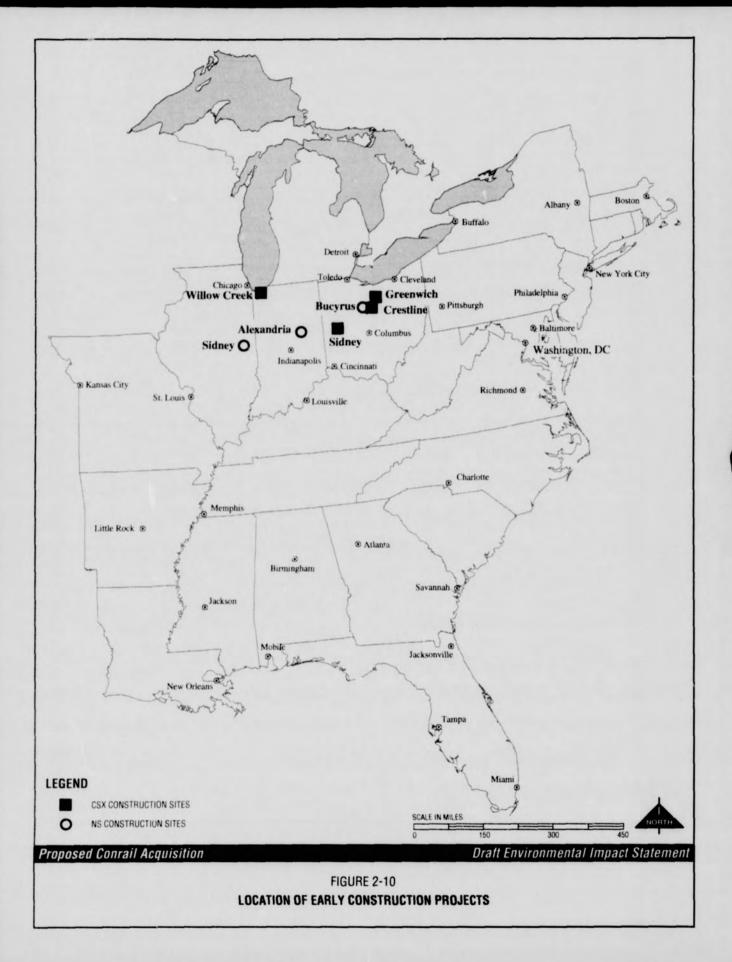
# 2.5 ALTERNATIVES TO THE PROPOSED ACTION

There are two basic alternatives to the proposed action: the No-Action Alternative under which the Board would not approve the Conrail Acquisition, and the Approval with Conditions Alternative under which the Board would approve the Acquisition with specific conditions and mitigation requirements, including environmental conditions.

# 2.5.1 No-Action Alternative

Under the No-Action Alternative, the Board would not approve the proposed CSX and NS Acquisition of Conrail, and the proposed changes in rail operations would not occur. Under this alternative, there would be no changes in operations of rail line segments, rail yards, or intermodal facilities as proposed by the Applicants. Similarly, there would be no new constructions or abandonments. Baseline conditions, that is, existing traffic levels along rail line segments and at rail yards and intermodal facilities, typically would continue unchanged except for changes resulting from normal railroad business and market conditions. Therefore, none of the anticipated beneficial or adverse environmental impacts of the proposed action would occur. The No-Action Alternative is the "base case." The base case or "pre-acquisition" condition provides the setting from which SEA evaluated the changes that would occur as a result of the proposed action. The proposed action and other alternatives are compared against the base case.

<sup>&</sup>lt;sup>4</sup> Surface Transportation Board Decision Sub-Nos. 1-7 - November 25, 1997.



# 2.5.2 Approval with Conditions Alternative

SEA also evaluated the alternative of Board approval of the proposed action with conditions. These conditions could include measures designed to mitigate anticipated environmental impacts, as well as proposed modifications to the proposed action such as trackage rights conditions requested by other parties in their Inconsistent or Responsive Applications.

# 2.6 INCONSISTENT AND RESPONSIVE APPLICATIONS

Parties of Record (PORs) to the proposed Conrail Acquisition were given the opportunity to file Inconsistent or Responsive (IR) Applications requesting the Board to impose conditions to the proposed Acquisition. These IR Applications could include requests for trackage rights, inclusion in the proposed Acquisition, or acquisition of specific facilities or rail lines. In its Decision No. 6, the Board required those PORs intending to submit IR Applications to first submit summary descriptions of their applications by August 22, 1997.

The Board also required that by October 1, 1997 IR Applicants file, either: (1) a Verified Statement that the IR relief being sought would have no significant environmental effects, or (2) a responsive environmental report (RER) containing detailed information on the potential environmental effects of the conditions being sought. IR applicants were required to file an RER if the requested relief, when added to the activities proposed by the Primary Application, would increase activities along a rail segment or at a rail yard by levels that would meet or exceed the Board's thresholds for environmental analysis. SEA used the Verified Statements and RERs as well as the Environmental Report to analyze the potential environmental effects of the IR Applications and confirm the accuracy of the documents.

Fifteen IR Applications were filed by PORs and accepted by the Board in its Decision No. 54 issued on November 20, 1997. SEA determined that 17 Verified Statements and RERs which cover 15 IR applications (one IR was filed jointly by two parties that had each filed Verified Statements, and one IR Applicant filed both a Verified Statement and a RER) are acceptable pursuant to the Board's requirements. These Verified Statements are published in Appendix Q of the Draft EIS. Based on its review of the information contained in the Verified Statements and RERs, SEA finds that none of the IR Applications would have significant environmental effects if they were approved by the Board 23 conditions to the proposed Acquisition.

Table 2-18 identifies the IR Applications the Board received and corresponding environmental documents (either Verified Statements or RERs) filed. The assive a IR Application number and the corresponding "sub" numbers for each requested condition appear in the table. It also notes whether the requested relief would be likely to have environmental effects when combined with the potential effects of the proposed Acquisition. The Verified Statements in Appendix Q provide additional information regarding the IR Applications that were filed.

# 2.7 COMMENTS AND REQUESTS FOR CONDITIONS

In addition to the IR applications discussed in Section 2.6, the Board received comments and requests for conditions (CRCs) by the October 21, 1997 deadline set out in the Board's Decision No. 6. CRCs were received from a wide variety of parties, including shippers, railroads, labor unions, and elected officials. Some of the comments were general in nature, did not contain Requests for Conditions, and were unlikely to cause environmental effects. Appendix U presents the 88 CRCs that included requested conditions and the potential environmental effects of the conditions requested.

While most of the CRCs focus on the competitive aspects of the merits of the proposed Acquisition, some raise environmental issues that SEA is considering and, as appropriate, are addressed in Chapters 4 and 5 of this Draft EIS. Pursuant to the Final Procedural Schedule published in the Board's Decision No. 6, responses to the IR Applications and CRCs were not due from the Applicants until December 15, 1997. Therefore, SEA will continue to consider the environmental issues raised in the CRCs until the Final EIS is published.

IR Number Sub-No.	IR Applicant	Conditions Sought/ State(s) Affected	Environmental Document	Significant Environmental Effects
1 Sub-No. 78	Ann Arbor Railroad	Trackage rights between Toledo, OH, and Chicago, IL	Verified Statement	None - no significant increase in traffic; thresholds not exceeded.
2 Sub-No. 72	Belvidere & Delaware Railway and Black River & Western Railroad (commonly managed)	Trackage rights in New Jersey and Pennsylvania; and eliminate interchange restrictions.	Verified Statement	None - no significant increase in operations; thresholds not exceeded.
3 Sub-No. 61	Bessemer and Lake Erie Railroad Co.	Alternative trackage rights over 1 of 2 alternative routes in Pennsylvania for the transport of coal.	Verified Statement	None - less than one added train per day; thresholds not exceeded.
4 Sub-Nos. 81-84	Canadian National Railway Co. and Grand Trunk Western Railroad, Inc. (con.monly owned)	Alternative trackage rights from West Detroit, MI to Toledo, OH or Trenton, MI; Trackage rights	Verified Statement	None - no significant change in operations; thresholds not exceeded. None - construction
		from South Bend, IN to Chicago, IL and in Buffalo, NY. Construction of two connections at Detroit, MI and one at Chicago, IL (Sub-Nos. 82-84).	RER/Notice of Exemption	would have insignificant and temporary environmental effects at the connection sites; compliance with existing Federal and state environmental regulations would minimize such effects.
5 Sub-No. 36	Elgin, Joliet and Eastern Railway Co.	Acquire Conrail's 51% ownership in the Indiana Harbor Belt Railroad (IHB) which operates in the Gary, IN and Chicago, IL areas.	Verified Statement	None - no significant change in operations; thresholds not exceeded.

Table 2-18 Inconsistent and Responsive Applications

Proposed Conrail Acquisition

F

IR Number Sub-No.	IR Applicant	Conditions Sought/ State(s) Affected	Environmental Document	Significant Environmental Effects	
6 Sub-No. 62	Illinois Central Railroad Co.	Acquire connecting line segment in Memphis, TN and joint rates with CSX in Illinois.	Verified Statement	None - up to four added trains per day; thresholds not exceeded.	
7 Sub-No. 77	Indiana & Ohio Railway Co.	Trackage rights over 7 Conrail segments and 1 CSX segment in Ohio and Indiana.	Verified Statement	None - less than one added train per day over most segments; thresholds not exceeded.	
8 Sub-No. 76	Indiana Southern Railroad, Inc.	Trackage rights on CSX in Indianapolis and between it and other points in Indiana; trackage rights over 7 miles of Indiana Railroad Company.	Verified Statement	None - no significant change in operations; thresholds not exceeded.	
9 Sub-No. 39	Livonia, Avon & Lakeville Railroad Corp. (LAL)	Acquire or obtain trackage rights over Conrail's Genesee Junction Yard in Chili, NY for interchange with Rochester & Southern.	Verified Statement	None - no significant change in operations; thresholds not exceeded.	
10 Sub-No. 75	New England Central Railroad	Trackage rights between Palmer, MA and New York, NY.	Verified Statement	None - no significant change in operations; thresholds not exceeded.	
11 Sub-No. 63	R.J. Corman Railroad Co./Western Ohio Line (commonly owned)	Acquire ownership or trackage rights over 2.3 miles of Conrail in Lima, OH.	Verified Statement	None - no change in operations; thresholds not exceeded.	

Table 2-18 Inconsistent and Responsive Applications

IR Number Sub-No.	IR Applicant Wheeling & Lake Erie Railway Co.	Conditions Sought/ State(s) Affected Trackage rights over Conrail from Ohio through Indiana to Chicago, IL; haulage rights to Toledo, OH and Erie, PA; access to certain Ohio shippers; and protection from bypass of the Neomodal Terminal in Starke County, OH.	Environmental Document	Significant Environmental Effects         None - change in operations by NS could shut down Neomodal Terminal; thresholds not exceeded.         None - no significant change in operations; thresholds not exceeded.	
12 Sub-No. 80			Verified statement		
13 Sub Nos. 59-60	Wisconsin Central Ltd.	Acquire a part of the Baltimore & Ohio Chicago Terminal Railroad Company Attenheim Subdivision interchange in Chicago, IL.	Verified Statement		
14 Sub-No. 69 Sub-No. 69 Sub-No. 69 Sub-No. 69 State of New York, by its Department of Transportation (filed joint IR application with New York City Economic Development Corporation)		Trackage rights on behalf of another railroad between connections of the Delaware & Hudson and between points in New York City and Long Island, NY; and elimination of limitations on Metro-North to grant trackage rights.	Verified Statement	None -one to two added trains per day; thresholds not exceeded.	

Table 2-18 Inconsistent and Responsive Applications

IR Number Sub-No.	IR Applicant	Conditions Sought/ State(s) Affected	Environmental Document	Significant Environmental Effects	
	New York City Economic Development Corporation (filed joint IR application with the State of New York)	Divestiture of Conrail's ownership of or trackage rights over segments from Queens, NY to Delaware & Hudson connections near Selkirk, NY to provide competitive access.	Verified Statement	None - one to two added trains per day; thresholds not exceeded	
15 Sub-No. 35	New York State Electric and Gas	Trackage rights for another railroad to its five plants in New York.	Verified Statement	None - no significant change in operations; thresholds not exceeded	

 Table 2-18

 Inconsistent and Responsive Applications

# CHAPTER 3

# Analysis Methods And Potential Mitigation Strategies

## **3.1 OVERVIEW**

This chapter summarizes the methods SEA used to analyze potential effects of the proposed Conrail Acquisition on safety, traffic and transportation (including passenger rail), energy, air quality, noise, cultural resources, hazardous materials, natural resources, land use, socioeconomics, and environmental justice. Appendices B through K contain more detailed descriptions of these approaches. SEA determined that the best, and indeed only, feasible approach to undertaking an environmental review of this 44,000-mile project would be to set criteria of significance for each of these areas of environmental investigation based on relevant regulations, including standards of agencies that regulate issues comparable to those before the Board in this case, and SEA's best professional judgment. The criteria that SEA has used are set out in this chapter. This chapter also presents, by environmental issue, various mitigation options and strategies that SEA considered as potential means to reduce or eliminate, to the extent feasible, significant environmental impacts of the proposed Conrail Acquisition.

## 3.1.1 General Method Approach

SEA first conducted environmental issue area-specific analyses for those proposed activities that meet or exceed the thresholds for environmental analysis in the Board's environmental rules. (See Chapter 1, "Purpose of and Need for the Conrail Acquisition.") SEA identified rail line segments, rail yards, and intermodal facilities where projected increases in rail or truck traffic were sufficient to exceed the Board's environmental analysis thresholds for air quality and noise as specified in 49 CFR 1105.7 (e). Chapter 1, "Purpose of and Need for the Conrail Acquisition," describes these thresholds and Chapter 2, "Proposed Action and Alternatives," lists the activities and locations that exceed these thresholds. The thresholds in the Board's environmental rules have been in place since 1991. They have been used in assessing air quality and noise in recent railroad mergers and acquisitions because they are a conservative and practical means of focusing analysis on those activities and areas with potential for significant impacts.

SEA determined that a threshold of an eight train per day increase in rail traffic generally would be a reasonable threshold for analyzing other potential environmental effects. Table 3-1 shows the potential environmental impacts evaluated for five types of Acquisition-related activities: changes in operations on rail line segments, at intermodal facilities and at rail yards; and, changes due to proposed rail line abandonments and new constructions, including the construction of rail lines and other facilities.

Issues	Operations on Rail Line Segments	Constructions	Operations at Intermodal Facilities	Operations at Rail Yards	Abandonments
Safety - Freight Rail Operation - Passenger Rail Operations - Roadway Crossings - Hazardous Materials Transport		•	•	•	•
Traffic and Transportation - Passenger Rail Service - Roadway Crossing Delay - Roadway Capacity - Navigation	*	•	•		*
Energy	•		•	•	•
Air Quality	•	•	•	•	•
Noise	•	•	•	•	
Cultural Resources		•			•
Hazardous Waste Sites		•			•
Natural Resources		•			•
Land Use/Socioeconomics		•			•
Environmental Justice		•	•	•	

Table 3-1 Environmental Issues Studied by Activity Types

In conducting its analyses, SEA used the methods presented in this chapter to evaluate potential system-wide and activity-specific impacts and determine whether these impacts exceeded the criteria of significance established for that area of concern. The system-wide evaluation is presented in Chapter 4, "System-Wide and Regional Setting, Impacts, and Initial Proposed Mitigation," while the state-by-state activity-specific evaluation is presented in Chapter 5, "State Setting, Impacts and Proposed Mitigation."

SEA reviewed and analyzed information provided in the Application, including the Operating Plans and the Environmental Report that accompanied it. SEA verified the analytical methods used by the Applicants, assessed the environmental comments and concerns raised to date, and conducted more than 170 site visits. Where the Applicants' methodology was not deemed the most appropriate for this Draft EIS, SEA developed alternative methods for conducting its analysis. Where necessary, SEA also asked the Applicants to supplement or correct data in their Environmental Report.

# 3.1.2 General Mitigation Approach

The Board has broad authority under 49 U.S.C. 11324(c) to impose mitigation conditions for the proposed Conrail Acquisition including environmental mitigation conditions if such conditions are "consistent with the public interest." However, the Board's authority is defined by its own regulations (49 CFR 1180.1(d)) and historical precedent. In general, the Board must conclude that the administrative record supports the imposition of the environmental mitigation condition at issue. Furthermore, the environmental mitigation condition must be reasonable, must be directly related to the impact caused by the Acquisition, must be appropriate to the scope and degree of the environmental impact, and should not unduly frustrate the ability of the Applicants to realize the anticipated public benefits of the proposed Conrail Acquisition.

It has long been the Board's policy in developing environmental mitigation conditions to focus on the potential environmental impacts that would be directly related to anticipated changes in rail traffic patterns (increases or decreases in train traffic on existing lines, new constructions, or proposed rail line abandonments). The Board's practice has been to mitigate only those impacts that would result directly from a proposed merger or acquisition, and not pre-existing conditions. The Board (like its predecessor, the Interstate Commerce Commission) has not imposed environmental mitigation measures; to remedy pre-existing conditions even though the mitigation measures that could improve the quality of life in a community. Under NEPA and in preparing an EIS the Board is not required to impose mitigation conditions. Because an EIS is being prepared, NEPA requires only that the Board take a "hard look" at the environmental consequences of the proposed Conrail Acquisition before making its decision. The Board could decide that the overall advantages of the proposal outweigh potentially significant environmental impacts in certain locations, and that imposing environmental mitigation would not be reasonable or warranted under the circumstances presented.

For the proposed Conrail Acquisition, SEA encourages the Applicants and communities to explore possibilities to mutually agree to mitigation beyond that which the Board would otherwise impose. Such mitigation measures could provide benefits beyond mitigation of the potential environmental impacts of the Acquisition-related increase in train traffic and could effectively address a variety of both pre-existing local concerns and Acquisition-related environmental effects.

# 3.1.3 Related Activities

SEA studied numerous safety and environmental issues related to the proposed Acquisition, as explained in this Chapter. The remainder of this Chapter is divided into sections specifically addressing the methods SEA used to analyze the potential environmental effects of the proposed Conrail Acquisition, and the mitigation options and strategies that SEA considered.

# 3.2 SAFETY: FREIGHT RAIL OPERATIONS

This section describes the data sources and analytic methods used to assess the possible changes in freight train accidents that could occur if the proposed Conrail Acquisition is approved. Historically, railroad accidents are relatively infrequent events when viewed in the context of the millions of train miles traveled annually. Freight train accidents include freight train collisions with other freight trains, derailments, and reportable train-vehicle accidents. Passenger rail safety issues are discussed in Section 3.3. Safety issues concerning highway/rail at-grade crossings are discussed in Section 3.4 and safety issues related to the transportation of hazardous materials are discussed in Section 3.5. Appendix B provides a more detailed discussion of the safety analysis methods, data sources, and mitigation strategies presented in this section.

In preparing this Draft EIS, SEA has not had the benefit of detailed information on how CSX and NS would individually integrate their operations with those of the Conrail system if the proposed Acquisition is approved. Recently both the Federal Railroad Administration (FRA) and the Allied Rail Unions asked the Board to consider potential safety issues resulting from the proposed integration of these major Class I railroads, and the ways in which CSX and NS (and Conrail in Shared Assets Areas), plan to integrate their systems and practices. This includes an analysis of how they plan to harmonize information in their systems, coordinate training dispatcners, modify their existing practices and procedures and implement personnel policies. In response, the Board, by Decision No. 52 issued November 3, 1997, directed that these safety issues be addressed in the EIS process for this case. The decision appears in Appendix T. In order to do so, the Board required the Applicants to file Safety Integration Plans by December 4, 1997, responding to the concerns that FRA had raised.

The Board further stated that the Safety Integration Plans would be included in the Draft EIS, and that FRA and all other interested parties could review and comment on the Safety Integration Plans during the 45-day comment period for the Draft EIS. The Board also stated that the safety integration plans and any comments received would be assessed in the Final EIS. The Safety Integration Plans are included in Volume 2. Because SEA did not have the Safety Integration Plans when preparing this Draft EIS, the safety integration issues raised by FRA and the Allied Rail Unions are not addressed in the safety analysis in the Draft EIS.

The proposed Conrail Acquisition would result in ownership and management changes on over 10,000 miles of Conrail's railroad system. Following the proposed Conrail Acquisition, the Applicants would operate approximately 44,000 total miles of rail line. In the Application, NS

and CSX, for analytic purposes, divided the three railroads into 1,022 rail line segments and identified the number of pre-Acquisition and post-Acquisition trains that would operate on each segment. The Applicants also identified the anticipated change in the number of rail cars switched in 230 switching yards and intermodal facilities.

In preparing this Draft EIS, SEA used a statistical methodology to predict potential changes in the likelihood of accidents resulting from Acquisition-related changes in rail operations. For the freight rail safety analysis, SEA undertook both a system-wide and localized safety analysis. SEA completed detailed safety analyses of anticipated operations of 54 rail line segments and 50 switching yards and intermodal terminals that had sufficient potential increases in rail activity to meet or exceed the Board's thresholds for environmental analysis. SEA's analysis estimated the probability of occurrence of freight train accidents that would result from the proposed Acquisition. SEA also quantitatively evaluated safety-related incidents within rail yards and terminals involving the release of hazardous materials because those incidents could have potential environmental impacts. SEA did not estimate the magnitude of individual accidents nor the impact that an accident might have in any specific location.

## 3.2.1 Methods of Freight Rail Safety Analysis

SEA used data from the U.S. Department of Transportation (DOT), the Association of American Railroads (AAR), and FRA to analyze potential freight rail safety issues. The Applicants supplemented this material with certain cargo, transport, and corporate training data.

SEA reviewed DOT data regarding releases of hazardous materials from yard and rail line activities. (described in Section 3.5, "Safety: Rail Transport of Hazardous Materials".) AAR provided annualized financial, ownership and operations statistics for the individual railroads and the national railroad industry.

SEA evaluated data from monthly accident/incident reports prepared by the Applicants for FRA's Office of Safety. All railroads must prepare and file an accident/incident report whenever a train accident causes damage above the FRA reporting threshold which, in 1996, was \$6,300. In addition, the railroads must report all train-vehicle accidents, regardless of severity. These reports provided historical national and railroad-specific data regarding passenger and freight train accidents, highway/rail at-grade crossing accidents, and accidental hazardous materials releases during rail transport, as discussed in Sections 3.3, "Safety: Passenger Rail Operations," 3.4, "Safety: Highway/Rail At-Grade Crossings," and 3.5, "Safety: Rail Transport of Hazardous Materials." SEA also reviewed the Applicants' Environmental Report for information on anticipated changes in the level of rail operations.

The underlying assumption of SEA's safety analyses is that rail-related accident occurrence is directly related to the level of rail activity. The general approach for SEA's evaluation of the potential effects on safety due to increased train traffic as a result of the proposed Acquisition was to:

- 1. Calculate the historical accident rates. For rail line segments, the rate is expressed in train accidents per million train-miles; for yards and terminals, it is expressed as yard accidents per train switching hour.
- 2. Apply the historical accident rates to the proposed rail operations on rail line segments and in yards and terminals to determine the predicted accident rate.

<u>System-Wide Analysis</u>. SEA examined the system-wide freight operations accident risk for both pre- and post-Acquisition configurations on all 119 rail line segments. To assess potential system-wide safety effects, SEA calculated the system-wide probability of an accident occurring based on the projected train activity data provided by each Applicant in the Operating Plans.

SEA also calculated potential highway-truck accident reduction based on the projected Acquisition-related reduction in truck vehicle miles that would be traveled. SEA used data on the vehicle miles traveled, provided by CSX and NS, and completed its calculations using accident rates published by the DOT National Highway Traffic and Safety Administration (NHTSA).

<u>Segment-Specific Analysis</u>. SEA performed segment-specific analyses of accidents on rail line segments where estimated increases in freight train traffic would exceed the Board's environmental thresholds for air quality and noise analysis. SEA estimated the average annual accident rate for freight operations on each specific segment and adjusted these estimates based on the track condition and whether or not the segment has a train control signal system, which reduces the potential for accidents.

Using the FRA train accident/incident database, SEA computed the projected increase in rail accidents on the affected segments for each state. SEA then compared the projected increase with the average annual accident variation for each state. This approach allows geographically-specific information to be compared with normal variations.

# 3.2.2 Criteria of Significance for Freight Rail Accidents

SEA determined that Acquisition-related increases in rail activity could potentially create significant safety impacts if certain criteria were exceeded. If a rail line segment is predicted to have an increase in accident rate greater than the normal variations in accident rates and to have an accident more frequently than once every 100 years per route mile, SEA considered mitigation for those safety impacts.

SEA based these two criteria of significance on the following information as determined from the annual FRA Accident/Incident Bulletins which summarize state and national accident statistics:

- Annual variation in the state-wide accident rate.
- National frequency of railroad accidents.

First, SEA calculated the accident rate for each segment in accordance with the approach set out in Appendix B. SEA compared the projected Acquisition-related change in accident rate for a rail line segment with the normal fluctuation in accident rate. SEA determined that, nationally over the last 20 years, the number of accidents varies plus or minus ten percent each year from the previous year.

Second, SEA determined whether the rail line segment is predicted to experience an accident more frequently than once every 100 years per route mile. 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 for determining when mitigation is warranted.

#### 3.2.3 Potential Mitigation Strategies for Freight Train Safety

Several possible mitigation strategies can reduce significant freight train safety risk impacts. SEA considered mitigation for those individual rail line segments that exceeded the levels of significance noted above. The mitigation that was considered was of the type that the Board typically considers and imposes to ensure freight train safety. Specifically, SEA looked at whether there was a need to implement the following measures:

- Enhanced rail-safety programs, such as closer spacing of rail cor defect detectors along rail lines.
- Increased frequency of track inspections, tank car inspections, and highway/rail at-grade crossing signal inspections.
- Toll-free numbers for use by emergency response forces in communities to contact railroad authorities.
- Training programs for community and emergency response personnel to enhance their abilities to respond to rail-related emergency incidents.
- Head-hardened rail-on-track curves in mountainous territory to reduce the risk of track breakage and serious derailments.

- · Centralized train traffic control systems for safer rail operations.
- · Replacement of old rails to reduce the risk of derailment.
- New track installation to increase the capacity of the rail line segment, which reduces the
  potential for train collisions.
- Improved rail signal system to make more efficient and safer use of track capacity.

# 3.3 SAFETY: PASSENGER RAIL OPERATIONS

SEA evaluated the potential for accidents between freight trains and either intercity passenger or commuter trains. SEA examined historic passenger and freight train accident rates and used this information to estimate accident rates that could be expected to result from the proposed Conrail Acquisition.

#### 3.3.1 Methods of Safety Analysis for Passenger Rail Operations

Passenger trains operate on a small number of rail line segments compared with freight trains on the Conrail, CSX, and NS systems. Passenger operations presently occur on 197 rail line segments on these systems. They take place in one of three different types of operating environments:

- On lines owned by the commuter or intercity rail authority, including Amtrak's Northeast Corridor, Southeastern Pennsylvania Transportation Authority, New Jersey Transit, and New York's Metro North Railroad.
- 2. On suburban lines where freight is a small share of the rail traffic, including the Chicago and Boston areas where the lines are dominated by commuter trains.
- 3. On lines controlled by freight railroads on which freight trains are the predominant traffic. For example, on the CSX Washington, D.C. area lines, a small fraction of the total daily train traffic is composed of Amtrak intercity and commuter trains. Virginia Railway Express and Maryland Mass Transit Administration commuter trains also operate on lines dominated by freight rail traffic.

Because of the substantial differences in the types of passenger rail operations and the various operating conditions, SEA decided to individually consider every rail line segment with passenger service. SEA evaluated 93 CSX, NS, and Conrail rail line segments that have intercity and/or commuter rail service and would experience an increase of one or more freight trains. SEA also calculated the potential increase in accidents on each of these segments. To do so, SEA first calculated the historic accident rate on these rail line segments and estimated the annual passenger train accident rate on a train-mile basis. Then SEA calculated the change in accident

rate based on the anticipated change in the number of freight trains that would operate on the segment if the proposed Acquisition is approved and implemented.

# 3.3.2 Criteria of Significance for Passenger Rail Accidents

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. Therefore, SEA first determined whether the predicted Acquisition-related change in the projected accident rate was greater than a more conservative annual fluctuation of 25 percent.

SEA then determined whether the rail line segment was predicted to experience an accident more frequently than once every 150 years. This frequency reflects the annual experience for passenger train accidents on the route mileage of the various passenger service providers. If there was a likelihood of an accident more frequently than once every 150 years and the change in accident rate was greater than 25 percent, SEA considered mitigation for the line segment.

## 3.3.3 Potential Mitigation Strategies for Passenger Rail Safety

The same potential mitigation strategies discussed in Section 3.2.3, "Potential Mitigation Strategies for Freight Train Safety," which typically require an improvement of train control and communication systems, apply to passenger rail as well.

# 3.4 SAFETY: HIGHWAY/RAIL AT-GRADE CROSSINGS

SEA evaluated safety implications to roadway users from increased train operations that would result from the proposed Acquisition. SEA performed analyses in accordance with the Board's regulations at 49 CFR 1105.7 (e)(2), which required Applicants to provide information on the effects of the proposed Conrail Acquisition on the local, regional, and national transportation system.

For the individual rail line segments, where traffic would increase by eight or more trains per day as a result of the proposed Acquisition, SEA evaluated the accident potential at locations where railroad tracks cross roadways at the same elevation (highway/rail at-grade crossings). Because separating the roadway from the railroad tracks (by means of overpasses or underpasses) eliminates the potential for train-vehicle accidents, SEA did not evaluate the train-vehicle accident risk where there are grade-separated crossings.

SEA conducted a safety analysis of highway/rail at-grade crossings by predicting the post-Acquisition accident risk. SEA did so by analyzing the 55 rail line segments with projected increases of eight or more trains per day. Of these 55 segments, 44 contained highway/rail atgrade crossings of public roads. The results of SEA's site-specific analyses, by line segment, are

included in Chapter 5, "State Setting, Impacts and Proposed Mitigation," in the appropriate state sections.

# 3.4.1 Methods of Safety Analysis for Highway/Rail At-Grade Crossings

SEA conducted a train-vehicle accident risk analysis for 2,070 highway/rail at-grade crossings on the 55 rail line segments described above. This information was used to compare the potential post-Acquisition risk with the pre-Acquisition risk. SEA used FRA-maintained databases containing information about train-vehicle accidents. The databases contain an inventory of physical and functional characteristics of highway/rail at-grade crossings (for example, the number of lanes and average daily traffic volumes) and records of highway/rail atgrade crossing accidents and incidents. SEA also reviewed the Applicants' Environmental Report for information on anticipated changes in the level of activity on particular rail lines.

SEA used standard FRA methods and formulas to estimate the train-vehicle accident risk at highway/rail at-grade crossings.<sup>1</sup> The formulas reflect the type of safety devices present at each crossing. Using the FRA formulas, SEA calculated the pre- and post-Acquisition accident risk for highway/rail at-grade crossings based on the characteristics of the crossing and statistical information on historic accident experience. There are two types of warning devices: passive and active. Passive warning devices are crossbucks (traditional X with "Railroad Crossing" on the cross) and stop signs. Active warning devices are flashing lights (a set of alternately flashing red lights and a ringing bell) and gates (used in addition to the lights and bells). Because the type of warning device is an important factor in determining the risk of collision, SEA's analysis took into account the type of existing warning device, as well as the daily number of trains and roadway average daily traffic (ADT).

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

SEA used the following approach to determine whether the proposed Conrail Acquisition would significantly affect safety at particular highway/rail at-grade crossings and potentially warrant mitigation.

For highway/rail at-grade crossings, SEA considered an increase of at least 0.05 accidents per year (or one additional accident every 20 years) as significant.

However, for, highway/rail at-grade crossings with relatively high potential accident frequencies, SEA determined that mitigation was warranted with a smaller increase in accident frequency. That is because where there already may be a relatively high rate of accidents, an increase in the frequency of accidents is less acceptable. For highway/rail at-grade crossings with lower

<sup>&</sup>lt;sup>1</sup> The FRA report, Summary of the DOT Rail-Highway Crossing Resource Allocation Procedure-Revised, 1992, describes these methods.

accident frequencies, a larger increase in frequency would have to be present before SEA considered the potential impact to be significant enough to potentially warrant mitigation.

Most states maintain a list of the 50 at-grade crossings with the highest risk for an accident. The average accident rate which warrants inclusion in the list is one accident every seven years. For highway/rail at-grade crossings that would either be within the top 50 for the state (in terms of risk of accident) or have accident frequencies of at least 0.15 per year (or one accident every seven years), whichever is lower, SEA considered an increase of at least 0.01 accidents per year (or one additional accident for every 100 years) as potentially significant.

SEA determined that mitigation was potentially warranted for at-grade crossings exceeding either of these criteria.

#### 3.4.3 Potential Mitigation Strategies for At-Grade Crossing Safety

A number of roadway and rail improvements are available to reduce significant safety hazards at highway/rail at-grade crossings. Because state and local officials generally have jurisdiction over roadways that cross railroad tracks, they typically develop and implement site-specific mitigation measures for individual highway/rail at-grade crossings. In addition, the Board in previous cases has imposed environmental mitigation conditions to ensure safety at specific atgrade crossings, which have included requiring the railroad to complete the following:

- Adding or upgrading highway/rail warning devices.
- Installing or upgrading automatic gates and warning devices.
- Adding or improving "Stop" lines and other traffic control pavement markings.
- Installing new or additional warning signs, such as those stating "Do not stop on tracks."
- Constructing a roadway median to reduce the opportunity for vehicles to maneuver around an activated crossing gate.
- Establishing a toll-free telephone number with the railroad and posting it on the at-grade warning device to enable drivers to report accidents, maintenance problems, or highway/rail at-grade crossings blocked by stopped trains.
- Improving visibility at highway/rail at-grade crossings by clearing vegetation or installing lighting to illuminate passing or stopped trains.

SEA made a preliminary determination of whether any of these types of mitigation was needed based on the individual circumstances presented.

# 3.5 SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary safety concern in rail transport of hazardous materials is the possibility of a spill or release during the transportation of the hazardous material from one point to another along a rail line. In preparing the Draft EIS, SEA developed separate methods to assess the potential safety-related effects on the rail transportation of hazardous materials that would result from the proposed Acquisition. Chapter 4, "System-Wide and Regional Setting, Impacts, and Proposed Mitigation," and Chapter 5, "State Setting, and Impacts for Proposed Mitigation," present the results of the system-wide and site-specific analyses, respectively. In performing its own analysis, SEA also took into account the fact that the Applicants, like all other railroads, must comply with various laws and regulations governing the safe transportation of hazardous materials, including the following:

- United States Department of Transportation (DOT) comprehensive hazardous materials regulations (49 CFR 170-179).
- · FRA regulations, which implement specific means to enforce the DOT regulations.
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).
- Resource Conservation and Recovery Act of 1976 (RCRA).

Applicants also must comply with FRA regulations covering track and signal safety standards, locomotive and freight car safety standards, and railroad operating rules and practices, all of which affect the risk of hazardous materials releases from accidents and derailments.

## 3.5.1 Methods of Safety Analysis for Rail Transport of Hazardous Materials

For the safety analysis of hazardous materials rail transport, SEA used data from the DOT Hazardous Materials Incident Reporting System (HMIRS). SEA also reviewed and analyzed the Applicants' Environmental Report for anticipated changes in the level of activity; and other published hazardous materials analyses involving rail transportation (including the transportation of chemicals and nuclear materials).

SEA used information from the last five years (1992 through 1996) reported to DOT by Conrail, CSX, and NS to identify the location, source, and size of spills on each railroad's lines. SEA used the data to summarize and compare the spill records of the railroads and to examine trends to determine the relative frequencies of spills on specific rail line segments and in yards and terminals. SEA used this historical incident data to derive the probability of a hazardous materials release after the proposed Acquisition.

SEA further reviewed the railroads' Operating Plans, Spill Prevention, Control, and Countermeasure (SPCC) plans, and hazardous materials handling plans to identify the railroads current hazardous materials handling procedures and procedures for responding to releases.

AAR, in conjunction with the Chemical Manufacturers Association, has developed standards and practices to manage the risk of a hazardous material spill that the railroads follow. These voluntary guidelines include identifying and establishing special procedures for so called "Key Routes" and "Key Trains." AAR defines "Key Routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. "Key trains" are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to an authorized maximum speed of 50 miles per hour and normally operate on track where higher speeds are allowed, i.e., Class 2 track or better. The AAR key route guidelines include special train handling procedures and inspections whenever wayside rail car defect detectors indicate potential concerns. The standards and practices for key routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

SEA evaluated two categories of potential changes in rail operations that could result in a significant change in hazardous materials transport. The first category is related to the transportation of a commodity from one point to another along a rail line, and the second is related to the switching and other handling of commodities in yards and terminals, such as switching and intermodal yards. SEA reviewed Conrail, CSX, and NS operating plans and hazardous materials handling plans to identify pre-Acquisition "key train" and "key route" information and the railroads' existing procedures for responding to releases of hazardous materials.

## 3.5.2 Criteria of Significance for Rail Transport of Hazardous Materials

SEA applied two different criteria to hazardous material transport in order to determine whether a potential change in hazardous material transport would be significant and what mitigation was potentially warranted.

- 1. SEA's first criterion was whether a rail line segment would become a "key route," following the proposed Acquisition.
- 2. SEA's second criterion was whether the projected increase in volume would double the number of hazardous material carloads traveling on a key route following the proposed Acquisition and would have 20,000 carloads per year or more.

For this proposed Acquisition, SEA considered rail line segments that meet the first criterion to warrant one level of mitigation. Rail line segments that meet the second criterion warrant additional mitigation. Rail line segments could meet both criteria, depending on the individual circumstances.

# 3.5.3 Potential Mitigation Strategies for Rail Transport of Hazardous Materials

SEA considered the following potential mitigation strategies, which are of the type that the Board previously has imposed to mitigate potentially significant impacts for rail transportation of hazardous materials. Mitigation strategies to increase safety when transporting hazardous materials on rail line segments and in yards and terminals can be both system-wide and sitespecific. The system-wide and site-specific mitigation strategies may be used separately or jointly.

## System-Wide Mitigation Options

System-wide mitigation strategies focus on overall plans and procedures to prevent, and quickly efficiently and effectively respond to hazardous materials releases. They include requiring the railroad to:

- 1. Develop and maintain appropriate emergency preparedness and prevention plans, such as Spill Prevention, Control, and Counter-measure plans.
- 2. Establish and maintain safety policies and procedures as part of system-wide operating plans.
- Conduct comprehensive analyses of failure modes and effects (that is, reviewing how future accidents or failures might occur and what the possible impacts would be) and implementing appropriate preventive measures.

# **Site-Specific Mitigation Options**

SEA considered site-specific mitigation measures to reduce potentially significant Acquisitionrelated impacts resulting from the increased transportation of hazardous materials on particular rail line segments. In this case, SEA considered mitigation of the type that the Board has imposed in the past, such as requiring the railroads to complete the following:

- 1. Improving highway/rail at-grade crossing warning devices to reduce the potential for trainvehicle accidents.
- Installing additional safety measures such as railcar defect detectors or improved signal systems.

For routes that would become "key routes" under the proposed Conrail Acquisition, mitigation strategies include requiring the Applicants to follow AAR's requirements for additional rail car defect detectors and other "key route" standards and practices. On routes where post-Acquisition volumes of hazardous materials transport would double, and exceed 20,000 rail cars per year, mitigation strategies include safety, contingency planning and training requirements in addition to AAR key route standards and practices.

# 3.6 TRANSPORTATION: PASSENGER RAIL SERVICE CAPABILITY

In this Draft EIS, SEA evaluated potential impacts of the proposed Conrail Acquisition on the capability of the rail line segments to accommodate existing passenger rail service and reasonably foreseeable new or expanded passenger service. Safety aspects of passenger rail service have been addressed before in Section 3.3, "Safety: Passenger Rail Operations."

To analyze passenger rail service capability, SEA identified and evaluated the impacts of the proposed Acquisition on existing and future passenger rail operations, including both intercity (Amtrak) and commuter rail service. SEA's first step was to identify rail line segments where freight operations share the line with passenger rail operations and where that shared line would experience any increase in freight traffic. Amtrak's routes along its Northeast Corridor (Boston to Washington, D.C.) and commuter rail lines serving metropolitan areas also were included in the analysis. The list of rail segments SEA evaluated is included in Appendix C.

# 3.6.1 Methods for Passenger Rail Service Capability Analysis

For segments that have existing passenger service and would have additional freight traffic after the Acquisition, SEA assumed that the existing levels of freight and passenger rail traffic sharing the same rail line segments currently operate in accordance with existing agreements between freight railroads and the passenger service operators. In analyzing the potential effects of the proposed Conrail Acquisition on existing passenger service, SEA used existing intercity and commuter passenger rail schedules.

Freight train schedules vary, depending on factors such as shippers' requirements and other variables. In addition, freight train operations on principal freight routes generally occur throughout the 24-hour day. The exception is Amtrak's Northeast Corridor, where freight trains operate almost entirely during the nighttime hours to avoid conflict with heavy daytime passenger operations.

In the Draft EIS, SEA analyzed the potential effect of additional freight train traffic upon current passenger train volumes and on any funded additional passenger train operations on the affected segments. In doing so, SEA considered a number of factors that can affect rail operations, including:

- Number of main tracks.
- Train control system.
- · Passing siding spacing and capacity.
- Cross-over tracks.
- · Times and frequency of freight service.

Times and frequency of commuter service.

After reviewing the various operating plans, operating agreements, physical characteristics, and train volumes and schedules collected as part of its analysis, SEA examined the capacity of each affected rail line segment. SEA then added the anticipated increases in freight train traffic that would result from the proposed Conrail Acquisition to determine the ability of the rail line segments to accommodate these higher volumes. If the analysis indicated that the rail line segments could accommodate the higher volumes, SEA's preliminary conclusion was that the proposed Acquisition would have no adverse impact on passenger train operations.

## 3.6.2 Criteria of Significance for Passenger Rail Service

SEA determined that impacts of freight operations on passenger rail service would be significant if the anticipated post-Acquisition increases in freight operations resulted in the need to reduce passenger service by one or more trains per day. However, the current operating agreements between the passenger service operators and the freight railroads preclude reduction in passenger service. Thus, any significant impact that would result from increased post-Acquisition freight operations could occur only after expiration of a current agreement.

## 3.6.3 Potential Mitigation Strategies for Passenger Rail Service

Potential measures to mitigate significant impacts on passenger rail operations would include requiring the Applicants to do the following:

- Improve train control systems to make more efficient use of track capacity.
- Install new track or passing sidings to increase the capacity of particular rail line segments.

# 3.7 TRANSPORTATION: HIGHWAY/RAIL AT-GRADE CROSSING DELAY

SEA performed analyses in accordance with the Board's regulations at 49 CFR 1105.7 (e)(2), which require an Applicant to describe the effects of the proposed Acquisition on the local, regional, and national transportation systems.

After reviewing and verifying data available to date, SEA assessed potential traffic impacts that would result from potential A quisition-related increased rail traffic. Where rail line segments pass over or under roadways, delays to vehicles on roadways would not occur. Therefore, assessment of vehicular delay was limited to highway/rail at-grade crossings on those rail line segments meeting or exceeding the Board's environmental thresholds. SEA also evaluated potential environmental impacts to roadway crossings from proposed abandonments and rail operations over new rail constructions planned as part of the proposed Conrail Acquisition. A detailed description of SEA's methodology is contained in Appendix C, "Traffic and Transportation Methods."

# 3.7.1 Methods for Highway/Rail At-Grade Crossing Delay Analysis

SEA estimated vehicular delay at highway/rail at-grade crossings caused by increased train traffic resulting from the proposed Acquisition. SEA initially identified potentially affected rail line segments for study by applying the Board's threshold standards of three additional freight trains per day for rail line segments in air quality nonattainment areas and eight additional freight trains per day for rail line segments in air quality attainment areas. This amounted to 119 rail line segments. Of these 119 segments, 109 segments had highway/rail at-grade crossings. SEA then evaluated potential changes in delay for at-grade crossings on the 109 affected rail line segments where average daily traffic volumes are 5,000 vehicles or greater. In arriving at this traffic volume figure, SEA considered general traffic engineering standards, field observations, and other environmental analyses conducted by SEA in previous rail mergers and acquisitions. SEA believes its use of these traffic volumes was reasonable and conservative. In SEA's experience, for roadways with average daily traffic volumes below 5,000, the additional vehicular delay that would result from Acquisition-related increased train traffic would be minimal.

For the at-grade crossing analysis, SEA developed five criteria to calculate pre-Acquisition and post-Acquisition roadway traffic conditions:

- Crossing delay per stopped vehicle.
- Maximum vehicle queue.
- Number of vehicles delayed per day.
- Average delay for all vehicles (expressed as level of service).
- Traffic level of service.

A detailed description of these values and the equations is contained in Appendix C, "Traffic and Transportation Methods." For any given train passby, impact on roadway traffic is measured by calculating crossing delay per stopped vehicle and maximum vehicle queue. The total number of vehicles delayed per day and the average delay for all vehicles measures the effect of multiple train passbys representing conditions over the entire day. These effects increase as the number of trains passing through an individual crossing increases. SEA used the single-train event delays and delays occurring over an entire day as the two measures for determining Acquisition-related impacts.

<u>Crossing Delay per Stopped Vehicle</u>. This criterion represents the average amount of time
a stopped vehicle would have to wait when traffic is stopped to let a train pass. In making
its calculations, SEA assumed that vehicles arrive at a crossing at a uniform rate and that the
average delay for any particular roadway vehicle is half the time the crossing is activated,
plus the time required for vehicles to disperse after the train has passed.

- <u>Maximum Vehicle Queue</u>. This criterion is the longest line of roadway traffic that would occur at the highway/rail at-grade crossing blocked by a passing train if the proposed Conrail Acquisition is approved. Taking a conservative approach, SEA assumed the maximum vehicle queue would occur during peak hours of roadway traffic.
- <u>Number of Vehicles Delayed per Day</u>. This criterion represents the number of vehicles, in a 24-hour period, that would be stopped for train crossings.
- Average Delay for All Vehicles. This criterion represents the average delay experienced by all vehicles that would cross the tracks. This average delay figure includes both vehicles that would and would not be delayed by trains.
- Level of Service. This criterion is a measure of the operational efficiency of the highway/rail at-grade crossing using procedures contained in the Transportation Research Board's Highway Capacity Manual, Special Report 209, Third Edition, Updated 1994. It is expressed as letter grades representing levels of service. These range from A (free flowing) to F (severely congested), as measured by the average delay experienced by all vehicles at the crossing.

#### **Emergency Vehicle Response**

In many communities, response to emergency incidents by fire, police, and emergency medical services (EMS) vehicles requires crossing railroad tracks at highway/rail at-grade crossing. The potential exists for the crossing to be blocked by a train, delaying the emergency vehicle. Therefore, emergency response vehicle delay issues require a traffic delay analysis, as described below.

To evaluate the potential effect of the proposed Conrail Acquisition on emergency vehicle response times at each at-grade crossing, SEA measured potential vehicle delay in two ways. One way was to measure the crossing delay per stopped vehicle. The other was to measure the total daily crossing blockage time.

The crossing delay per stopped vehicle is the average amount of time a driver would have to wait at a highway/rail at-grade crossing when traffic is stopped to let a train pass. It is described abov • in more detail.

Total daily crossing blockage time is an indicator of the risk of delay because it indirectly measures the probability that a crossing would be blocked when an emergency vehicle would need to cross the tracks. SEA calculated this figure by multiplying the anticipated blocked crossing time per train by the number of daily trains.

# 3.7.2 Criteria of Significance for Highway/Rail At-Grade Crossing Delay

SEA established criteria for assessing potentially significant impacts on post-Acquisition vehicle delay for highway/rail at-grade crossings based upon (1) the increase in crossing delay per stopped vehicle and (2) the increase in average delay for all vehicles.

For crossing delay per individual vehicle, SEA concluded that an increase of 30 seconds would be considered to be a significant effect. This figure generally represents a driver's tolerance threshold, above which the driver perceives an intermittent blocked crossing event as added delay. The crossing delay per vehicle is not directly related to the level of service but represents only the amount of delay to individual drivers stopped at the highway/rail at-grade crossing. The average delay figures are related to traffic levels of service as defined by the Transportation Research Board's Highway Capacity Manual.

SEA converted average delay for <u>all</u> vehicles to levels of service and determined that a level of service of C or better would be treated as satisfactory. If the potential increase in average delay per vehicle would result in a level of service equal or worse than D, SEA considered the impact of the proposed Acquisition as potentially significant. SEA considers the change significant if the increase in average delay per vehicle resulted in (1) a post-Acquisition level of service E and F regardless of the pre-Acquisition condition, or (2) a reduction from pre-Acquisition level-of-service C or better to a post-Acquisition level of service D.

# 3.7.3 Potential Mitigation Strategies for Highway/Rail At-Grade Crossing Delay

Mitigation strategies that SEA considered for alleviating adverse significant impacts to vehicular traffic (including emergency response vehicles) that would result from increased rail-related activity from the proposed Acquisition include the following:

- Making adjustments to train speed that could reduce vehicular delay without affecting safety.
- Constructing a separated grade crossing to separate the roadway and rail line to completely eliminate crossing delay.
- Diverting some or all of the rail traffic to another line to eliminate the Acquisition-related impacts on the crossing.
- Upgrading communications between the railroads and emergency dispatch centers to warn them about approaching trains.

# 3.8 TRANSPORTATION: ROADWAY EFFECTS FROM RAIL FACILITY MODIFICATIONS

SEA evaluated the potential impact of additional truck traffic on the roadway system that would result from increased railroad activity at existing, expanded or new intermodal facilities or from a proposed abandonment if the Acquisition is approved and implemented. Potential impacts

from construction projects are discussed briefly here; the analysis is included in more detail in Section 3.7 "Transportation: Highway/Rail At-Grade Crossing Delay." A detailed description of the analysis methods is contained in Appendix C. SEA performed analyses in accordance with the Board's regulations at 49 CFR 1105.7 (e)(2), which required Applicants to describe the effects of the proposed Acquisition on the local, regional, and national transportation systems.

# 3.8.1 Methods for Determining Transportation Impacts from Increased Railroad Activities

## **Intermodal Facilities**

Rail and truck activity at several existing, expanded, and new intermodal facilities can be expected to increase due to Acquisition-related effects. The Board's thresholds for environmental analysis at intermodal facilities require analysis if the average daily traffic on roadways leading to and from the facility are expected to increase by at least 10 percent as a result of additional trucks, or truck traffic is anticipated to increase by 50 trucks per day at the facility as a result of the proposed transaction (49 CFR 1105.7 (e)(5)). SEA identified 23 intermodal facilities that would meet or exceed the Board's environmental thresholds at 49 CFR 1105.7(5).

For each additional truck the 23 intermodal facilities that SEA studied, SEA assumed that a round-trip would be made and therefore added two truck trips to the average daily traffic volume on affected surrounding roadways. In completing the following steps for each of these facilities, SEA:

- 1. Conducted a site visit.
- 2. Identified truck routes on area roadways.
- 3. Calculated the number of trucks expected to use each roadway.
- Supplemented average daily traffic information from the Environmental Report by collecting information from local and state transportation and planning agencies or by performing traffic counts.
- 5. Calculated percentage increases in average daily traffic for each affected roadway based on projected additional daily truck trips.

Using this analysis, SEA measured the extent of the impact of the additional truck activity on local and regional roadways that would result if the proposed Acquisition were approved and implemented.

## **New Construction**

The two primary types of construction projects proposed as part of the proposed Acquisition are new rail constructions connecting existing lines, and the construction of new facilities, including fueling and intermodal facilities, both on and off of existing right-of-way. New rail connections can result in either physical changes to existing highway/rail at-grade crossings or the construction of new at-grade crossings. Since new rail connection proposals have effects on highway/rail at-grade crossings similar to those on existing line segments, SEA used the same analysis method for both. This method is described in Section 3.7.1 under "Methods for Estimating Roadway Crossing Delay."

The primary environmental impacts of new fueling and intermodal facility construction projects would be the resulting increases in rail and truck activity. These increases are similar to those for intermodal facilities with increased activity, so the same analysis was used. (See Section 3.3.2.)

## **Rail Line Abandonments**

The primary environmental issue that arises in connection with a rail line abandonment project is the diversion of freight transportation from rail to trucks or to other rail lines. A secondary issue is the elimination of highway/rail at-grade crossings, which is considered in Section 3.7, "Transportation: Highway/Rail At-Grade Crossing Delay," and Section 3.4, "Safety: Highway/Rail At-Grade Crossings."

The Board's regulations in 49 CFR 1105.7 (e)(2) require railroads to provide a description of the effects of proposed abandonments on regional and local transportation systems. In this case, the Applicants have proposed the abandonment of only three rail line segments having a total length of 58.2 miles. To be conservative, SEA assumed if the abandonment projects are approved, most of the freight currently hauled on the lines would be moved by truck.

CSX and NS identified the number of freight car loads that would be diverted to trucks for each rail segment proposed for abandonment. The railroads estimated freight car loads at four trucks per rail carload. Using that figure, SEA determined the number of additional truck trips per year on the local, regional, and national transportation systems that would result from each proposed abandonment. SEA then converted the additional yearly truck trips to a daily rate to determine whether the additional truck trips would have a measurable impact on the daily traffic patterns on nearby roads.

## 3.8.2 Criteria of Significance for Vehicular Transportation Impacts

SEA established standards for studying potential impacts of increased truck activity at existing, expanded and new intermodal and fueling facilities, both on and off of existing right-of-way, and from rail line abandonments that would result from the proposed Acquisition. In setting appropriate standards, SEA determined that it would examine any roadway where a 10 percent

increase in traffic would result from the proposed Acquisition. Because local conditions vary, SEA did not establish one uniform standard to identify where the impacts would be significant enough to justify the consideration of mitigation. Rather, on a case-by-case basis, SEA considered both the percentage increase of average daily traffic and the traffic volume capacity of the affected roadway to determine whether mitigation might be warranted.

# 3.8.3 Potential Mitigation Strategies for Significant Vehicular Transportation Impacts

SEA identified potential mitigation strategies that could be used to reduce the potentially significant impacts of Acquisition-related increased traffic at existing, expanded, and new intermodal and fueling facilities and rail yards, or from rail line abandonments. These include requiring the railroads, where appropriate and feasible, to do the following:

- Provide separate entrances and exits or additional access gates to improve vehicular circulation. Separate or additional driveways are effective in dispersing trucks onto the surrounding roadway network and thus reduce the amount of traffic on individual roadways.
- Relocate truck gate areas into the interior of the intermodal or fueling facility to provide additional queue area within the facility. This could help reduce or eliminate truck queues extending onto the adjacent off-site roadways while awaiting entry to a facility.
- Adjust the hours that a facility could accept truck deliveries to reduce truck traffic during peak hours.
- Upgrade truck check-in with computerized manifest logging (waybilling) and hand-held computers to reduce queue length and waiting time at the gate.
- Discuss with the community or appropriate roadway regulatory authority the feasibility of providing exclusive left turn lanes and/or signals at intersections between the nearby off-site roadway and the entrance roadway to a facility to reduce queues.
- · Add on-site truck check-in lanes to reduce congestion within a facility.
- Discuss with the community or appropriate roadway regulatory authority the feasibility of improving roadway capacity through signal and pavement marking improvement.

# **3.9 TRANSPORTATION: NAVIGATION**

The proposed Acquisition could affect waterborne transportation by increasing traffic on rail line segments that have movable bridges crossing navigable waters. To evaluate the impact of the proposed Acquisition on navigation, SEA reviewed the proposed activities that could affect navigable waters of the United States and thus would be subject to regulations of the U.S. Coast Guard (Coast Guard) and the U.S. Army Corps of Engineers (COE).

### 3.9.1 Methods for Evoluating Navigation Issues

Using FRA data on all existing railroad bridges over navigable waters under the jurisdiction of the Coast Guard, SEA identified 181 movable bridges on CSX, NS, and Conrail lines. Then SEA compared the locations of these bridges with those rail line segments which would meet or exceed the Board's thresholds for environmental analysis. SEA also determined whether the proposed rail constructions and abandonments would affect waterborne navigation.

For those bridges located on a segment meeting the Board's thresholds for environmental analysis, SEA verified the Applicants' Operating Plans and contacted the appropriate district office of the Coast Guard. Coast Guard rules state that waterborne navigation has the right-ofway in all instances. Accordingly, any operating constraints found to be warranted would be placed on the railroad and not on the waterborne users at the location of movable bridg es across navigable waterways.

## 3.9.2 Criteria of Significance for Navigation

Because Coast Guard rules determine that waterborne navigation has the right-of-way at movable bridges, there would be no impact on waterborne navigation from Acquisition-related changes in train traffic. Therefore, SEA did not establish a criterion of significance.

### 3.9.3 Potential Mitigation for Navigation

SEA has preliminarily determined that no mitigation of navigation impacts is required. For the reasons discussed above, the potential impacts of the proposed Acquisition on waterborne navigation would be negligible or nonexistent.

## 3.10 ENERGY

The analysis of system-wide energy impacts anticipated from the proposed Conrail Acquisition in the Draft EIS is based on the Board's environmental regulations at 49 CFR 1105.7(e)(4), which require Applicants to describe:

- The effect of the proposed Acquisition on transportation of energy resources such as coal or oil.
- The effect of the proposed Acquisition on recyclable commodities such as aluminum, plastic, and paper.
- The degree to which the proposed Acquisition would result in an increase or decrease in overall energy efficiency.
- The change in energy consumption that would result from rail-to-truck diversions if the proposed Acquisition caused diversions from rail to truck of more than 1,000 rail carloads

per year, or an average of 50 rail carloads per mile per year for any part of the affected line. If this were to occur, the regulations state that SEA would quantify the resulting change in energy consumption and show the data and methods used to arrive at the figure given.

Appendix D "Energy Methods," describes in detail the assumptions, methodologies, and formulas for estimating anticipated system-wide fuel consumption changes that would result from the proposed Acquisition.

## 3.10.1 Methods for Energy Analysis

Coal is the dominant energy resource transported by CSX and NS. SEA reviewed the Applicant's Environmental Report, Operating Plans and Verified Statements to assess qualitatively the proposed Conrail Acquisition's effect on the quantities of coal that would be transported. SEA also reviewed the Operating Plans to determine whether CSX or NS would change the quantities of recyclable commodities transported as a result of the proposed Acquisition.

SEA completed a quantitative assessment of the proposed Acquisition's effects on overall energy efficiency in terms of fuel consumption by first estimating system-wide changes in fuel consumption from truck-to-rail diversions and operational changes at rail yards and intermodal facilities. Then, SEA estimated changes in fuel consumption resulting from automobile traffic delays at highway/rail at-grade crossings and rail-to-truck diversions. The final step was to calculate the net change in the number of gallons of fuel consumed.

#### 3.10.2 Criteria of Significance for Energy

For its energy analysis, SEA examined the anticipated impacts of:

- The change in system-wide fuel consumption.
- Any changes in the quantities of energy resources and recyclable commodities transported.
- Traffic delays at highway/rail at-grade crossings.

SEA considered an impact significant if:

- There would be an increase in system-wide fuel consumption.
- Operational changes would reduce the quantities of energy resources and/or recyclable commodities transported by rail.
- Traffic delays at highway/rail at-grade crossings would result in an average increase in fuel consumption of 500 galions of gasoline per day per crossing studied.

### 3.10.3 Potential Mitigation Strategies for Energy



After conducting the analysis described above, SEA determined that the proposed Conrail Acquisition would increase overall energy efficiency. Therefore, no specific energy mitigation measures were developed or considered.

## 3.11 AIR QUALITY

### National Ambient Air Quality Standards

SEA evaluated potential environmental effects of the proposed 44,000 mile rail system on air quality on a system-wide, regional and local (county) basis. SEA's analysis focused on projected air pollutant emissions from diesel locomotives, trucks, and automobiles because they are the primary sources of emissions related to the proposed Conrail Acquisition. SEA's analyses evaluate whether Acquisition-related activities have the potential to affect compliance with the National Ambient Air Quality Standards (NAAQS).

The U.S. Environmental Protection Agency (EPA) has developed NAAQS for six criteria pollutants. The criteria pollutants are: Sulfur dioxide  $(SO_2)$ , Nitrogen dioxide  $(NO_2)$ , Ozone  $(O_3)$ , Carbon monoxide (CO), Lead (Pb), and Particulate matter less than 10 microns in diameter (PM-10). The National Ambient Air Quality Standards are shown in Table 3-2.

Emissions of nitrogen oxides  $(NO_x)$  and hydrocarbons or volatile organic compounds (HCs or VOCs) contribute to the formation of surface level ozone. Therefore, numerous air quality programs are directed at reducing emissions of  $NO_x$  (including  $NO_2$ ) and VOCs in order to reduce ozone pollution. Locomotives and trucks emit sulfur oxides (SO<sub>x</sub>, including SO<sub>2</sub>), NO<sub>x</sub>, CO, PM-10, and HCs/VOCs.

## Board's Thresholds for Air Quality Analysis

With respect to potential environmental impacts of the proposed Conrail Acquisition on air quality, the Board has specified thresholds for analyzing the air quality impacts of increased rail line segment, rail yard and intermodal facility activity at 49 CFR 1105.7(e)(5). The Board's thresholds are summarized in Table 3-3.

Pollutant	Primary*		Secondary*	
	ppm	μg/m <sup>3</sup>	ppm	µg/m
Carbon Monoxide (CO)				
Maximum 8-Hour Concentration <sup>b</sup>	9		9	
Maximum 1-Hour Concentration <sup>b</sup>	35		35	
Lead				
Maximum Arithmetic Mean Averaged Over 3 Consecutive Months		1.5		
Nitrogen Dioxide (NO <sub>2</sub> )				
Annual Arithmetic Average	0.05	100	0.05	100
Ozone (O <sub>3</sub> )				
1-Hour Maximum <sup>e</sup>	0.12	235	0.12	235
8-Hour (3 year average/4th highest daily 8-hour concentration)	0.08		0.08	
Inhalable Particulates (PM10)/(PM25)				
Annual Geometric Mean/Arithmetic Mean		50/15		50
Maximum 24-Hour Concentration <sup>b</sup> /98th percentile		150/65		150
Sulfur Dioxide (SO <sub>2</sub> )				
Annual Arithmetic Mean	0.03	80		
Maximum 24-Hour Concentration <sup>b</sup>	0.14	365		
Maximum 3-Hour Concentration b			0.50	1,300

Table 3-2 Air Quality Standards ...... ....

Primary standards are for protection of human health, se uv is are ior protection of vegetation, wildlife and other resources.

b Not to be exceeded more than once a year.

c Current ozone standard is being phased out.

ppm = parts per million;  $\mu g/m^3$  = micrograms per cubic meter

Units: Sources:

40 CFR Part 50 -- National Primary and Secondary Ambient Air Quality Standards 40 CFR

50.12 "National Primary and Secondary Standard for Lead"

Activity Type	Attainment Areas	Nonattainment Areas Increase of 3 trains per day or a 50 percent increase in annual gross ton miles.	
Rail Line Segments	Increase of 8 trains per day or a 100 percent increase in annual gross ton miles.		
Rail Yards	Increase of 100 percent in carload activity per day.	Increase of 20 percent in carload activity per day.	
Intermodal Facilities	Increase of 50 trucks per day or 10 percent increase in average daily traffic volume on any affected road segment.	Increase of 50 trucks per day or a 10 percent increase in average daily traffic volume on any affected road segment.	

Table 3-3 Board's Thresholds for Air Quality Impact Analysis

After determining what activities would be evaluated, SEA used EPA emissions thresholds as a benchmark to determine where additional analysis of emissions changes was warranted. EPA created the Ozone Transport Region (OTR) as part of the Clean Air Act Amendments of 1990 (See Chapter 4, "System-wide and Regional Setting, Impacts and Proposed Mitigation," Figure 4-5). Some EPA emissions thresholds change in the OTR. The EPA thresholds are:

- 100 tons per year emissions increase in attainment and maintenance areas, inside or outside of the OTR, or in marginal and moderate nonattainment areas outside the OTR.
- 50 tons per year emissions increase in serious ozone nonattainment areas inside or outside of the OTR, or marginal and moderate nonattainment areas inside the OTR.
- 25 tons per year emissions increase in severe ozone nonattainment areas inside or outside of the OTR.

See Chapter 4, "System-wide and Regional Setting, Impacts and Proposed Mitigation," and Appendix E, "Air Quality," for more detailed discussion of these terms.

SEA conferred with EPA while performing the air quality analysis for this study. In general, EPA concurred with SEA's approach for calculating potential air quality effects of the proposed Acquisition. (See the October 24, 1997 letter copied in Appendix M "Consultation with Agencies and Agency Responses.")

# 3.11.1 System-Wide and Regional Analysis

As a result of the proposed Acquisition, the number of trains and trucks transporting freight would change. In addition, the amount of time vehicles idle at highway/rail at-grade crossings would be affected. Therefore, SEA looked at the following to estimate system-wide and regional air pollutant emissions effects:

- Projected changes in operations on rail line segments that meet or exceed the Board's thresholds. SEA calculated the anticipated net emissions changes from rail line segments as the difference between increased emissions attributable to projected increased train traffic and decreased emissions attributable to projected decreased train traffic and truck-to-rail diversions. Estimates of the net diversion were derived from projected system-wide fuel use changes for locomotives (fuel use increases) and trucks (fuel use decreases).
- Potential changes in truck or rail activities at intermodal facilities and rail yards. SEA
  calculated anticipated system-wide changes in emissions for activities at rail yards and
  intermodal facilities by summing the activity changes for all individual facilities.

SEA evaluated the increases and decreases in emissions and developed an overall net change figure for the entire system. A description of SEA's system-wide air quality analysis is found in Chapter 4 "System-wide and Regional Setting, Impacts and Proposed Mitigation."

# 3.11.2 County-Wide Analysis

SEA evaluated potential county-wide emissions changes following a five-step process. Specifically, SEA did the following:

- 1. Determined which rail line segments or other facilities that would exceed the Board's environmental thresholds for air quality evaluation. (See Table 3-3.)
- 2. Identified counties (and cities) that include portions of rail line segments or other proposed activities that would exceed the Board's environmental thresholds.
- Summed projected emissions increases due to anticipated changes in activities on rail line segments and other activities that would exceed the Board's environmental thresholds in the counties and cities identified.
- 4. Compared potential emissions increase totals with EPA thresholds used as a screening level, which are the emissions increases that would require a permit if the source were a stationary source (rather than a mobile source, such as trains, trucks, and other vehicles). EPA's emissions thresholds are listed above following Table 3-3.
- If emissions in a particular county/jurisdiction exceeded the thresholds described above, SEA conducted a complete detailed emissions analysis in that county/jurisdiction, considering all potential emissions increases and decreases from proposed Acquisition-related activity changes.

# 3.11.3 Criteria of Significance

The system-wide analysis showed that overall emissions would diminish compared with existing conditions due to the proposed diversion of truck traffic to rail except for  $SO_2$ . However, the county-wide analysis showed that in spite of overall decreases in emissions, some counties would experience local increases. Local increases only exceeded emissions screening thresholds for  $NO_x$  and CO. SEA assessed the significance of proposed emissions increases in those counties considering the following:

- The amount of any potential emissions increases in the county measured in tons per year.
- The potential percentage increase in emissions relative to EPA's total county-wide emissions inventory<sup>2</sup> for the most recent data (1995).
- The attainment or nonattainment status of the county.

If the proposed Acquisition-related percentage increase in emissions of a pollutant would be less than one percent of the total emission inventory of a county, SEA considered it insignificant in all cases. If the percentage increase in emissions of a given pollutant would be greater than one percent, SEA considered it potentially significant if the county was designated by EPA as a nonattainment area for the pollutant. SEA also considered whether EPA had issued a NO<sub>x</sub> waiver for counties designated as nonattainment areas for ozone. A NO<sub>x</sub> waiver is a determination by EPA that local NO<sub>x</sub> emissions are not a significant factor contributing to ozone formation in the county. For counties designated by EPA as attainment areas for a pollutant, SEA considered the potential Acquisition-related net emissions increase and the level of existing emissions in the county to determine whether the potential increase in emissions would be significant. SEA considered the regional aspects of ozone formation for counties located in states in the OTR, and included evaluation of NO<sub>x</sub> emission reductions resulting from truck-torail diversions. The results of SEA's local (county) air quality analyses can be found in Chapter 5 "State Settings, Impacts and Proposed Mitigation."

## 3.11.4 Potential Mitigation Strategies for Air Quality Effects

SEA considered a number of potential air quality impact mitigation strategies. Mitigation strategies SEA assessed include measures that could reduce pollutants that would be emitted directly by changes in railroad operations or that would result from the proposed Conrail Acquisition. Other strategies SEA considered include mitigation that could reduce emissions by non-railroad operations in a community (i.e., power plants other industrial facilities). However, the Board has no explicit authority to regulate railroad emissions and lacks jurisdiction

<sup>&</sup>lt;sup>2</sup> Emissions Trends Viewer CD, 1985-1995, Version 1.0, September 1996, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC.

over non-railroad property. Therefore, these mitigation strategies would be beyond the Board's authority and would not be imposed absent a voluntary agreement by the Applicants.

## 3.11.5 Potential Air Quality Mitigation Strategies Involving Railroad Operations

In past cases, when applicants have identified and volunteered to implement more efficient operating practices that would address potential environmental impact (for example, reduced idling time for equipment or closing freight car doors to reduce drag and increase fuel efficiency of moving trains), the Board has imposed these practices as conditions. Accordingly, mitigation strategies that SEA typically considers and has considered in this Draft EIS include the following:

- Voluntary reduction of locomotive, truck, and lift equipment idling time at intermodal facilities to reduce the time the engines are running.
- Increasing train speed to minimize the time vehicles are idling at highway/rail at-grade crossings.
- Applying water or chemical dust suppressants to minimize fugitive dust (particulate matter) emissions at new constructions and abandonments sites.

#### 3.12 NOISE

SEA examined potential noise impacts (that is, unwanted sound) resulting from Acquisitionrelated railroad operations changes. In general, people easily and intuitively understand aspects of sound based on what they hear. However, the measurement, analysis, and description of sound can be quite complicated. To understand SEA's noise analysis, it is helpful to understand the some specialized terms that are used in the remainder of this section and defined below. More detailed information regarding the noise analysis is presented in Appendix F, "Noise Methods."

**Decibel (dB).** The unit used to measure the magnitude of sound level is the decibel (dB). The human ear responds to both great and slight changes in pressure. Decibels are measures of a logarithmic scale that compresses the range of sound pressures audible to the human ear. The pressure scale covers a range from 0 to 140, where 0 decibels represents a reference sound level necessary for a minimum sensation of hearing and 140 decibels represents the level at which pain occurs. Decibels are used to express sound pressure levels that people hear.

<u>A-weighted Sound Level (dBA)</u>. The most commonly used measure of noise is expressed in decibels (dBA). The A-weighted sound level is a single-number measurement of sound intensity with weighted frequency characteristics that correspond to human subjective response to noise; that is, it best represents what the human ear hears.

**Day-Night Average Noise Level (L**<sub>dn</sub>). One of the most widely accepted measures of cumulative noise exposure in residential areas is the Day-Night Average Noise Level ( $L_{dn}$ ).  $L_{dn}$  is the A-weighted equivalent sound level for a 24-hour period. The  $L_{dn}$  calculation includes an additional 10-decibel noise weighting during the nighttime hours (between 10 p.m. and 7 a.m.). This weighting accounts for people's increased sensitivity to noise at night, when background noise levels are typically lower and people are trying to sleep.

Noise. Any disagreeable or undesired sound or other disturbance; unwanted sound.

<u>Sound</u>. A physical disturbance in a medium (for example, air) that the human ear is capable of detecting.

### Sources of Noise

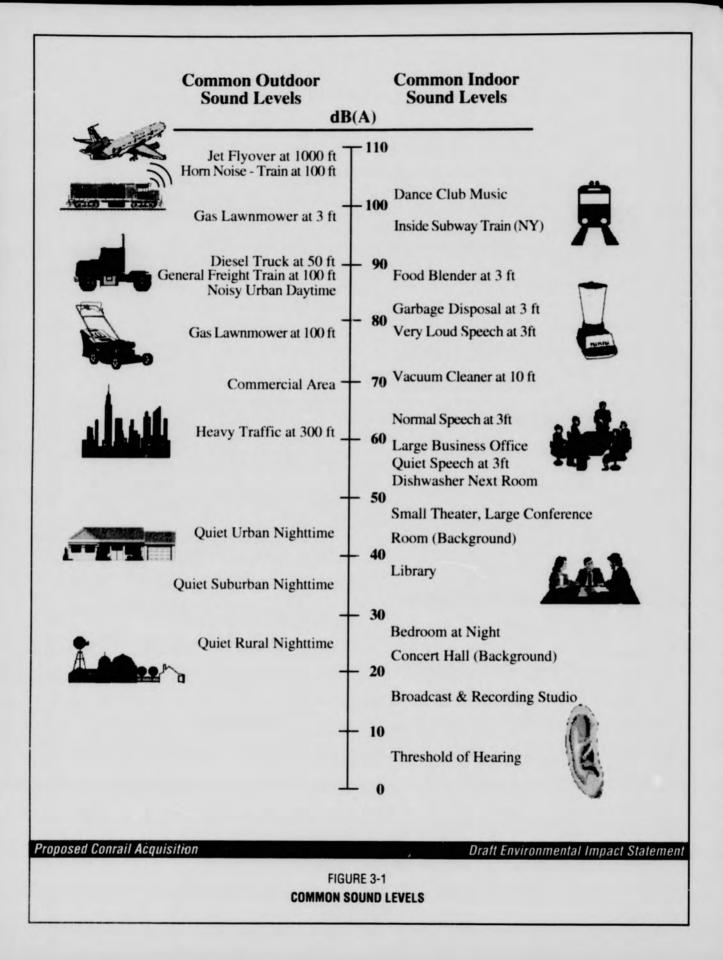
Environmental noise issues analyzed by SEA in this draft EIS include the potential effects of :

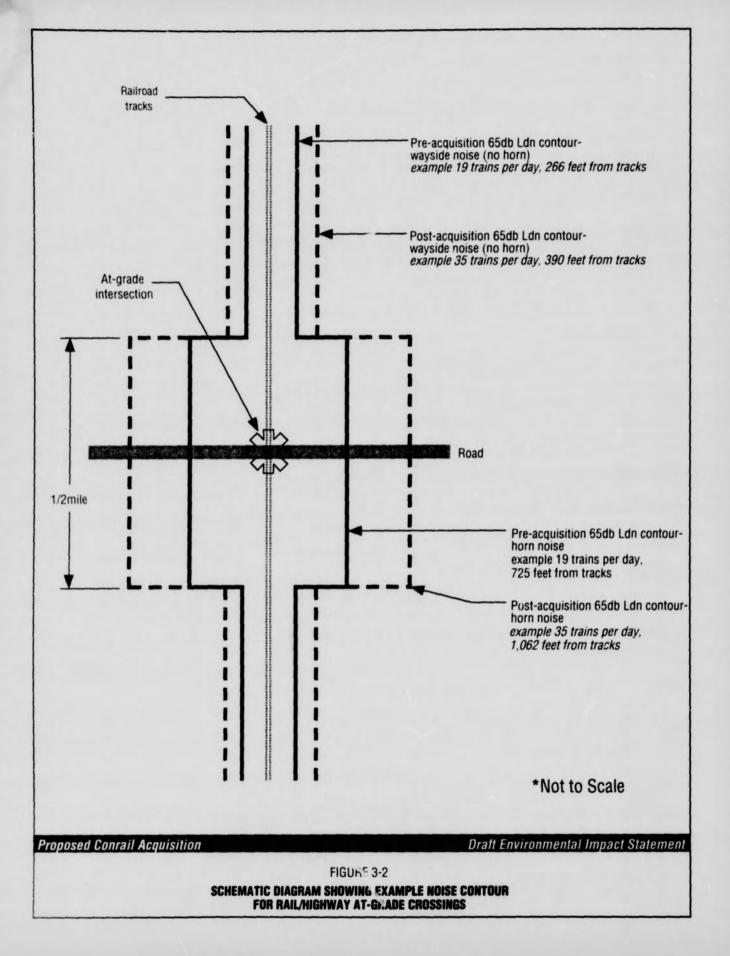
- 1. Train horns.
- 2. Wheels rolling over rails (wheel/rail).
- 3. Diesel locomotive noise.

Most of the adverse noise impacts in a case involving railroads comes from train horns in the vicinity of at-grade crossings where trains currently are required to sound their horns for safety purposes, the area of train horn noise (above 65 dBA  $L_{dn}$ ) can extend approximately 1,500 feet from the track into the adjacent community, while wheel/rail noise typically extends up to 500 feet from the track. These distances depend on a number of factors, including train speed and the number of trains per day.

Figure 3-1 shows noise levels from transportation sources and compares them with common household and community noise levels. Data in Figure 3-1 are expressed in instantaneous sound pressure levels. A person would have to be exposed to these noise levels 24 hours a day for them to correspond to a similar noise level on an  $L_{dn}$  basis.

Figure 3-2 shows a schematic diagram of examples of train noise contours. The narrow area of impact is caused by wayside noise (wheel/rail and diesel locomotive noise), while the larger area of impact is caused by train horn sounding in the vicinity of the grade crossing. This particular example shows noise contours for pre-Acquisition activity of 19 trains per day and post-Acquisition activity of 35 trains per day. In this example, the post-Acquisition 65 dBA  $L_{dn}$  noise contours expand to 1,062 feet from the tracks in the vicinity of a grade crossing as a result of the Acquisition-related increased train horn sounding.





Grade Crossing Noise Effects. As explained in more detail below, the Federal Railroad Administration (FRA) currently requires train engineers to blow train horns at highway/rail atgrade crossings to ensure safety. However, FRA has indicated that it will propose new rules on train horn blowing procedures in 1998. These new rules may allow communities to apply for an exception to horn blowing at certain grade crossings that meet explicit criteria. Specifically, FRA would no longer require train engineers to sound the train horn at grade crossings with special upgraded safety features. These areas could be designated as "quiet zones." Examples of the safety features that may meet FRA's criteria include four-quadrant gates and median barriers that preclude motorists from entering the crossings while the crossing arm is down. Until FRA develops and implements final regulations, SEA's preliminary conclusion is it would not be considered feasible or appropriate for SEA to impose "quiet zones" as a mitigation measure. However, communities will have the opportunity to qualify for "quiet zones" once the FRA regulations are in place.

<u>Wayside Noise Effect</u>. Wayside noise is the sound of a train as it passes by. Wayside noise is comprised of steel wheel/rail interaction noise and locomotive diesel engine noise. This type of noise can be reduced by constructing barriers between the railway noise source and adjoining land uses and by installing building sound insulation. Noise barriers include earth berms and walls that block the sound. Building sound insulation consists of special windows and other building treatments that reduce interior noise. For this project, it appears that noise barriers would be the preferred type of noise mitigation for substantially impacted areas. Barriers could be built on railroad property and would also protect exterior areas, such as yards and parks, from high train noise levels. Lubrication of rails on curved track also could reduce "wheel squeal" noise from the friction between the wheel and the rail. Additional discussion of noise mitigation measures is included in Appendix F, "Noise Methods."

## 3.12.1 Methods for Noise Analysis

SEA's noise analysis in this case was consistent with the Board's environmental regulations at 49 CFR 1105.7 (e)(6). These regulations specify that noise be studied for all rail line segments where traffic would increase by at least 100 percent as measured by annual gross ton miles, or by at least eight trains per day as a result of the proposed transaction. The regulations specify two types of noise level criteria for noise analysis:

1. An incremental increase in noise levels over existing L<sub>dn</sub> of three dBA or more,

2. An increase to a noise level of 65 dBA Lan or greater.

The railroads conducted a noise analysis for the Environmental Report submitted with their Application. In their analysis, they identified the areas that would exceed Board thresholds for environmental review as a result of either projected increases in train traffic or gross ton miles. Then the railroads developed a model for calculating the probable noise effects of these proposed increases. In doing so, the railroads identified the communities where noise increases would be likely to exceed a 2 dBA  $L_{dn}$  noise criteria. The railroads quantified the number of sensitive

receptors, such as schools, libraries, hospitals, residences, retirement communities, churches, and nursing homes that would experience noise levels above 65 dBA  $L_{dn}$  as a result of train traffic increases.

The railroads' noise analysis is based on baseline train operations, projected post-Acquisition activity levels from the CSX and NS Operating Plans, noise models available in pertinent technical literature (referenced in the Environmental Report), and noise measurements taken at existing Conrail, CSX, and NS facilities.

After the railroads filed their noise information, SEA checked and verified the Environmental Report noise studies. SEA first reviewed the Environmental Report noise models for technical approach and accuracy. Then, SEA did its own modeling of noise impacts and checked receptor counts on line segments where aerial photos were available. SEA also checked the noise analyses of the proposed new connections, rail yards, and intermodal facilities studied in the Environmental Report.

In its verification process, SEA

- 1. Re-modeled noise impact analysis to compare its data with the Applicants' analysis.
- Generated noise contours (projected distance to the 65 dBA L<sub>dn</sub> noise level from the tracks) based on pre- and post-Acquisition train projections of operations.
- 3. Counted the number of sensitive receptors within the noise contours, using aerial photographs.
- 4. Compared the numbers of sensitive receptors identified by the railroads and SEA. If SEA's sensitive receptor count differed substantially from the railroads' count, SEA attempted to determine the possible cause(s), including (a) different assumed train operation, or (b) different or inaccurate base mapping.

Where a reasonable correlation was achieved between Applicants' analysis and SEA's analysis, the railroads' results were used. In instances where the results did not correlate well, SEA used its corrected values, which SEA viewed as the most accurate noise impact data available.

# 3.12.2 Mitigation Criteria for Noise

As explained in more detail in the following section, train horn noise is a deliberate noise to promote safety; therefore SEA did not consider alternatives to mitigate train horn noise impacts feasible at this time. SEA considered noise impacts of wheel/rail and locomotive engine noise (wayside noise) to warrant potential mitigation if any sensitive receptors are exposed to noise levels above 70 dBA  $L_{dn}$  and have a 5 dBA  $L_{dn}$  increase.

### 3.12.3 Mitigation Strategies for Noise

SEA has considered various noise mitigation strategies for the proposed Acquisition. SEA assessed whether there are any ways to reduce horn noise in the vicinity of grade crossings without significantly affecting railroad safety. SEA also examined different ways to mitigate wayside noise (locomotive and wheel/rail noise) along the length of affected rail line segments.

Near grade crossings, warning horns on locomotives constitute the overwhelming majority of noise generated by freight rail operation. Unlike other potentially adverse environmental impacts, rail horn noise is a deliberately created annoyance imposed to enhance safety The Board has consistently declined to mitigate noise caused by horns on grounds, stating that "any attempt to significantly reduce [t.ain horn] noise levels at grade crossings would jeopardize safety, which we consider to be of paramount importance."<sup>3</sup> Reducing loudness below certain levels could increase train-vehicle accidents. As the Board has found, reducing the duration of the horn could result in similar negative impacts on safety.

Recently passed Federal legislation, namely, Swift Act (49 U.S.C 20153) - directs the Secretary of the DOT to develop regulations relating to noise and rail safety measures. These regulations could establish the criteria for "quiet zones" for train horns. FRA is the Federal agency within DOT that has primary responsibility for establishing train horn requirements and alternatives. FRA has indicated that it is unlikely to have "quiet zone" or other regulations in place before 1999. In these circumstances, SEA's preliminary conclusion is that it should not recommend alternatives to train horns being sounded at highway/rail at-grade crossings until FRA develops and adopts its new regulations because doing so before that time could compromise safety. Communities will have the opportunity to qualify for "quiet zones" once the final FRA regulations are in place.

SEA does consider noise impacts to sensitive receptors which meet or exceed the mitigation criteria, stated above, for wayside noise alone to warrant potential mitigation. Table 3-4 identifies a number of possible noise mitigation options, the associated advantages and diadvantages, costs, and the circumstances where the mitigation might be applied based on the information available to date. Site-specific considerations, for both horn and wayside noise, would dictate the appropriateness of an option for a particular site.

Finance Docket No. 32760, Union Pacific Railroad-Control-Southern Pacific Railroad; Decision No. 44 Surface Transportation Board, served August 12, 1996.

Minigation Option	Advantages	Disadvantages	Cost per Unit	<b>Typical Application</b>
Grade Crossing Separations	Eliminates horn sounding	Very expensive	\$5 million to \$10 million per separation	When also used to address traffic and safety
(Directional Horns) Grade Crossing Warning Device	Greatly reduced noise impact; inexpensive	Unproven technology	\$12,000 to \$15,000 per crossing	Medium residential density, high rail traffic crossing
Crossing Closures	Could eliminate horn sounding; inexpensive	Worsens vehicular traffic; limits access	Less than \$10,000 per crossing	Low vehicular traffic crossing
Four Quad Gates	Could eliminate horn sounding; considered safe		\$100,000 to \$300,000 per crossing	High residential density, high rail and vehicular traffic crossing
Median Barriers	Could eliminate horn sounding	Some safety concerns; Not yet FRA authorized	Varies: \$20,000 to \$200,000 * per crossing	Moderate residential density, medium/ high rail and vehicular traffic crossing
One Way Street Pairings	Could eliminate horn sounding <sup>b</sup> , inexpensive	Worsens vehicular traffic; limits access; Not yet FRA authorized	Less than \$10,000 per crossing	Low vehicular traffic crossing
Building Sound Insulation	Inexpensive noise reduction for nearby buildings, expensive when implemented over larger areas	Noise reduction effective inside buildings	\$10,000 to \$20,000 per building	Low residential density crossing (horn or wayside °)
Continuous Welded Rail	Provides system- wide noise reduction	Too expensive for noise benefit alone	Varies depending on existing track	System-wide wayside noise °
Wheel/Rail Maintenance	Provides system- wide noise reduction	Usually already done (no new improvement)	Varies depending on current procedures	System-wide wayside noise °
Noise Barriers	Reduces wayside ° noise in high density residential areas	Can be expensive, restricts access, maintenance	\$200 per linear foot	High-density wayside noise °
Land Use Provisions	Can prevent future impacts, reduce severe impacts	Potentially expensive to acquire affected properties	Varies depending on property values	Undeveloped or highly affected areas

Table 3-4 Potential Noise Mitigation Summary

\* Costs include construction and installation; costs vary with the length of the barrier which is dictated by queue lengths.

With one-way street, the cross bar can cover the entire street width and eliminate the need for horns.

Wayside noise refers to wheel/rail noise and locomotive noise.

# 3.13 CULTURAL RESOURCES

### 3.13.1 Methods for Cultural Resources Analysis

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations, qualified archaeologists, historians, and architectural historians reviewed each proposed abandonment and construction proposal to determine whether those Acquisition-related projects would adversely affect significant cultural resources (that is, historic properties) and if so whether, and what, mitigation would be warranted.

SEA identified an "Area of Potential Effect," a geographically defined zone that varies according to the nature of each site-specific action, and determined whether historic properties might be affected. SEA also conducted archival searches and site visits to determine the presence of historic properties. SEA presented a preliminary eligibility and determination of effects (that is, beneficial, adverse, or neutral) to the State Historic Preservation Officer (SHPO) in every state potentially affected by the proposed abandonments and constructions. During the remainder of the EIS process, SEA will continue to consult with the SHPOs on Section 106 issues. Under NHPA, any historic or archaeological resource listed on or eligible for listing on the National Register of Historic Places requires review under NHPA Section 106. Appendix G, "Cultural Resources," contains the detailed methods for the cultural resources analysis.

#### 3.13.2 Criteria of Significance for Cultural Resources

SEA used the "Criteria of Effect and Adverse Effect" (36 CFR 800.9) developed by the Advisory Council on Historic Preservation (ACHP) as the criteria for determining whether there would be an adverse impact on historic properties. These criteria address the effects of various actions that could alter the significance of a historic property's characteristics. The actions include physical destruction, damage, or alteration; isolation; introduction of elements that are out of character; neglect; and transfer, lease or sale. Appendix G presents the ACHP criteria in detail.

#### 3.13.3 Potential Mitigation Strategies for Cultural Resources

Appropriate mitigation to address Acquisition-related adverse impacts or specific historic properties would be developed following consultation with the appropriate SHPO. Typically, the Board requires applicants to document cultural and historic resources that would be affected by the proposed action. In general, documentation includes taking photographs of the resource taken before it is altered or destroyed, and providing a description and history of the resource. In certain cases, the Board has required documentation in accordance with Historic American Building Survey/Historic American Engineering Record (HABS/HAER) standards.

For mitigating potential impacts to archaeological resources, the Board typically requires the railroad to cease construction or abandonment salvage activities if significant archaeological resources are identified during salvage of a rail line approved for abandonment or new

construction of a rail line. Activities could resume after the railroad contacts the appropriate SHPO regarding the identification and evaluation of any artifacts that have been discovered.

# 3.14 HAZARDOUS MATERIALS AND WASTE SITES

The following section describes how SEA identified and evaluated potential impacts to hazardous waste sites. This includes a discussion of applicable Federal and state regulations that have been used in SEA's impact analysis and screening process, the types of data collected, and the methods used to determine whether the potential impacts resulting from the proposed Conrail Acquisition would be significant. SEA's analysis methods and potential mitigation strategies for environmental impacts associated with the transportation of hazardous materials are described in Section 3.5, "Safety: Rail Transport of Hazardous Materials."

SEA based its analysis of hazardous waste sites on the Board's environmental regulations and other relevant statutes, as summarized below.

- The Board's environmental regulations at 49 CFR 1105.7(e)(7) state that a railroad must identify locations of known hazardous waste sites, or locations where there have been known hazardous materials spills on the right-of-way in its Environmental Report. These regulations also require identification of the types of hazardous materials involved.
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) directs the EPA to establish procedures for investigating uncontrolled or abandoned hazardous waste sites for priority remediation under the Superfund Program and establishes a National Priority List (NPL).
- The Resource Conservation and Recovery Act of 1976 (RCRA) establishes requirements for permitting hazardous waste facilities and requires the EPA to compile a listing of these facilities that generate, transport, store, treat, or dispose of hazardous waste.

#### 3.14.1 Methods for Hazardous Materials and Waste Site Analysis

SEA analyzed whether any hazardous waste sites would be affected by any of the proposed construction and abandonments projects associated with the proposed Conrail Acquisition. It did so because construction of a new rail line or salvage activities that take place when abandonment authority is exercised can disturb areas where hazardous materials have been released. However, SEA identified only hazardous waste sites within 500 feet of Acquisition-related construction or abandonment activities because sites located more than 500 feet from the railroad right-of-way were unlikely to be disturbed. SEA eliminated operational changes on rail line segments or at intermodal facilities and rail yards from its analysis because operational changes typically do not have any effects on hazardous waste sites. SEA's analysis ultimately focused on identified sites with potential hazardous waste impacts located in seven states: Indiana, Illinois, Maryland, Michigan, New Jersey, New York, and Ohio.

## Data Sources and Types

To be sure that all potential hazardous waste sites within 500 feet of the proposed constructions and abandonments had been identified, SEA conducted site visits and researched a variety of data sources, including databases compiled by Environmental Data Resources, Inc., records kept by fire marshals and regulatory agencies, and maps. The full list of data sources reviewed to determine possible hazardous materials sites is included in Appendix H.

## 3.14.2 Criteria of Significance for Hazardous Materials and Waste Sites

For the identified hazardous waste sites, SEA determined that, where hazardous materials could be present but appropriate regulatory authorities had removed the contamination or had determined that no remedial action was required, impacts at these sites were not significant and did not warrant further investigation.

SEA considered impacts to be potentially significant if there was reason to believe disturbances or release of hazardous materials could occur in an uncontrolled manner as a result of the Acquisition-related construction or abandonment activities.

## 3.14.3 Potential Mitigation Strategies for Hazardous Materials and Waste Sites

There are many Federal, state, and local statutes and regulations that govern how railroads and other private parties must respond to releases of hazardous materials or disturbances of hazardous waste sites. Moreover, Applicants have detailed procedures and policies designed to reduce or avoid any impacts at all locations where hazardous materials may be used or encountered.

As required by regulations and guided by their own procedures, CSX and NS state that they will complete the following:

- Implement construction-related measures to protect the public, workers, and the local environment during site construction activities, including, as warranted, sediment and erosion control.
- Complete site characterization, such as Phase I and II assessments or remedial investigations that identify the nature and extent of contamination.
- Remediate contaminated sites to bring these sites into compliance with all governing Federal, state, and local regulations. A wide range of techniques and technologies is available for the remediation of contaminated sites.

Because of the extensive regulation by other entities and Applicant's own internal procedures and practices, SEA's preliminary determination is that additional mitigation measures imposed by the Board may not be necessary.

## 3.15 NATURAL RESOURCES

SEA assessed potential environmental impacts to water resources, wetlands, and biological resources that would result from the proposed Conrail Acquisition. The biological resources assessment included identifying and analyzing potential impacts to Federally listed threatened and endangered species, protected wildlife habitats and migration corridors, wildlife refuges and sanctuaries, national, state and/or local parks or forests, and protected unique or critical habitats. SEA followed the guidelines of CEQ, the requirements of NEPA, and the Board's environmental regulations in conducting its analysis.

The natural resources analysis focused on any proposed physical alteration of habitats and water resources. SEA determined that the potential for impacts to water resources, wetlands, and biological resources would most likely be associated with site-specific projects related to the proposed rail line abandonments, modifications to rail yards and intermodal facilities, and the proposed construction of new rail lines segments. Therefore, SEA conducted a site visit at each of the potentially affected locations to review potential impacts to habitats, existing water resources, and wetlands. SEA determined that typically, operational changes, such as increases or decreases in the number of trains on a line segment, have little direct effect on natural resources. Therefore, SEA did not attempt to identify natural resources on existing rail line segments that would experience only Acquisition-related operational changes.

#### 3.15.1 Methods for Natural Resources Analysis

SEA reviewed the information the Applicants presented in the Environmental Report. Additionally, SEA referred to such data sources as U.S. Geological Survey (USGS) 7.5-minute series topographic maps and U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps to identify potential natural resource impacts at each potentially affected site.

SEA also consulted with the USFWS and other agencies and examined appropriate representative specimens (for example, as present in herbarium collections, defined as collections of dried plants mounted and labeled for use in scientific examination) and searched for biological resource listings on the Internet.

SEA then visited the site of proposed abandonments and constructions to gather information about existing conditions and to evaluate the potential for impacts to natural resources. In preparation for its site visits, SEA studied, as feasible, representative live or preserved specimens of Federally protected plants and animals as well as photocopies of specimens and descriptions of species and their associations. At each of the sites visited, SEA observed the natural environment, recorded its finding, and photographed natural resources.

SEA began its evaluation of impacts during field review. By comparing planned activity sites with the existing location of water resources and wetlands, SEA estimated potential environmental effects on natural resources that could result from the proposed Conrail

Acquisition. SEA also assessed the potential need for Federal permits, including U.S. Army Corps of Engineers' permits for impacts to jurisdictional wetlands as defined in Section 404 of the Clean Water Act. As part of the impact assessment, SEA also assessed the potential need for additional coordination and permitting by other appropriate regulatory and review agencies.

SEA's impact analysis included a detailed review of the Applicants' standard specifications for construction activities. SEA paid particular attention to both CSX and NS internal requirements for Best Management Practices in determining the need for mitigation of potential impacts. More details of SEA's approach can be found in Appendix I, "Natural Resources."

### 3.15.2 Criteria of Significance for Natural Resources

SEA considered impacts to natural resources to be significant if there would be any:

- Wetlands removed, altered, or filled without complying with Section 404 of the Clean Water Act.
- Impacts to wetlands known to function as habitat for endangered species.
- Direct impacts to reservoirs or other drinking water sources.
- Impacts to identified locations of threatened and endangered species.
- · Loss of or degradation of parklands, forest preserves, refuges, or wildlife sanctuaries.

#### 3.15.3 Potential Mitigation Strategies for Natural Resources

As noted, various regulatory programs and requirements address potential impacts to wetlands, water resources, threatened and endangered species and critical habitat. The U.S. Army Corps of Engineers administers the Clean Water Act Section 404 and Section 10 permitting programs which regulate placement of fill in wetlands and alterations of water bodies. EPA administers (through state water quality agencies) the National Pollution Discharge Elimination System (NPDES) program which regulates discharges of pollutants to surface waters. The NPDES program addresses both point source discharges and non-point source discharges (stormwater runoff).

The Endangered Species Act regulates potential impacts to endangered or threatened species and their critical habitat. Since railroad construction activities must comply with these regulatory programs and the programs provide specific measures, SEA believes, based on the information available to date, that it would not be necessary for the Board to impose mitigation conditions that would essentially duplicate what existing regulations already require. Under the Endangered Species Act and other Federal statutes, the Applicants would be required to conduct the following activities:

- Notify regulatory agencies before construction begins if wetlands or other water bodies are
  to be filled or altered by construction activities. The Applicants must obtain Federal, state,
  and local permits if construction activities require the alteration of wetlands, ponds, lakes,
  streams, or rivers, or if these activities would cause soil or other materials to wash into these
  water resources. The Applicants also must use appropriate techniques to minimize effects
  to water bodies.
- Adjust planned activities, when possible, to avoid disturbance or adverse effects to natural resources. This may include modifying alignment of connectors to avoid or minimize impacts to wetland areas, streams, or critical habitats.
- Preserve, restore, or create compensation wetlands to replace the acres affected by construction or abandonment activities, where there are extensive impacts to wetland or water resources.
- Schedule construction within critical habitats of threatened and endangered species during the time of year to avoid interference with breeding or reproductive seasons.

As noted, SEA reviewed the Applicants' standard construction specifications to determine what Best Management Practices (BMPs) are incorporated to protect water quality and related natural resources. SEA believes, based on the information available at this point, that the Applicants' BMPs are adequate and sees no need to recommend that the Board impose its own mitigation conditions. Specifically, the BMPs state that Applicants would complete the following activities:

- Perform all construction and abandonment activities within the existing rail bed to the greatest extent feasible to minimize the area of disturbance.
- Stabilize vegetation disturbance by reseeding the area, to assist with erosion and sediment control of the disturbed site.
- Implement erosion and sediment control activities to avoid or minimize impacts to water resources. These practices include the use of geotextiles, straw bales, silt fencing, and sediment detention ponds.
- Keep all newly constructed drainage facilities, such as pipes or culverts, free of obstruction to allow expected water flow through the associated area.
- Use high quality, contaminant-free construction materials during the construction of new rail lines.

# 3.16 LAND USE/SOCIOECONOMICS

SEA analyzed the potential Acquisition-related land use impacts of the proposed rail line abandonment and construction projects. Constructions and abandonments are the two types of Acquisition-related activities that could have potential impacts on land use. Pursuant to the Board's rules at 49 CFR 1105.7(e)(3), each abandonment and construction location was assessed for the following issues:

- Consistency of each proposed construction and abandonment with land use plans currently in effect.
- · Effect of each proposed construction and abandonment on prime farmland.
- Consistency of each proposed construction and abandonment with existing Coastal Zone Management plans.
- Suitability of rights-of-way that could otherwise be abandoned for alternative public uses including trail use.

In addition, SEA addressed land use/socioeconomics issues directly related to changes in the physical environment from the proposed rail line segment abandonments and constructions. Where significant impacts were identified, SEA developed potential mitigation strategies. (See Appendix J, "Land Use/Socioeconomics.")

#### 3.16.1 Land Use/Socioeconomics Methodology

SEA consulted with local, county, regional, and state planning agencies, as needed, in the area of each construction and abandonment project location. SEA conducted site visits to verify the accuracy of the information on land use presented in the Environmental Report. SEA developed data on existing land uses, using information from the Environmental Report; aerial photos; USGS mapping; Geographic Information System (GIS) computerized mapping; zoning maps site visit records; and consultation with local, county, regional, and state planning agencies. SEA also gathered information regarding prime farmland, coastal zone management, and Indian reservations from consultations with appropriate agencies.

In evaluating the potential effects on land use that would result from the proposed abandonments and constructions, SEA considered the following factors:

- Consistency with local land use plans. If an inconsistency with the plans was identified, SEA consulted with local planning officials to determine the nature and extent of the effect.
- Effects to Prime Farmlands, as defined by the Natural Resources Conservation Service. When SEA identified potential effects on Prime Farmland, it consulted with local planning officials to determine the nature and extent of the effect.
- Consistency with State Coastal Zone Management Plans. Where proposed actions were subject to review by the state coastal zone management agency for consistency with Coastal Zone Management Plans, SEA prepared consistency certifications and provided them to the

state agencies. If, as part of the state agency's review of the consistency certificate, SEA determines that modifications to the proposed rail line segment construction/abandonment or mitigation measures are required, the Board could include these modifications and mitigation measures as conditions to any decision approving the application.

- Need for relocation or demolition of any business or residence as a direct result of the proposed construction activities. Where businesses or residences would need to be relocated or demolished, SEA identified and described the potential impacts in this Draft EIS.
- Existence of any new construction or abandonment project within the lands of Native American reservations. In that event, SEA consulted with the reservation government to determine the consistency with land use plans and other requirements.

For the proposed abandonments, SEA performed the following additional analysis:

- Evaluation of suitability of each abandoned right-of-way for alternative public uses and trail
  uses. SEA based this evaluation on consultation with the local, county, and state agencies
  regarding the potential uses of these rights-of-way.
- Identification of alternative modes of transportation for goods and services that would be affected by the proposed abandonments.

## 3.16.2 Criteria of Significance for Land Use/Socioeconomics

SEA considered a potential impact to land use or socioeconomic conditions significant if any of the following was likely to occur:

- <u>Consistency with Land Use Plan</u>: The proposed new construction or abandonment would be inconsistent with local land use plans in such a way that proceeding with the activity would substantially alter the character and planned use of the adjoining area.
- <u>Prime Farmland</u>: The impact to prime farmland would be such that a substantial portion of farmland in the county, as defined by local land use planning authorities, would be removed from actual or potential production.
- <u>Coastal Zone</u>: The proposed new construction or abandonment occurring in a coastal zone would be inconsistent with the requirements of the state coastal zone management department.
- <u>Socioeconomics</u>: A proposed abandonment or construction would result in the direct elimination of jobs as a result of or related to changes to the physical environment.

## 3.16.3 Potential Mitigation Strategies for Land Use and Socioeconomics

Consistent with the Board's practice in previous cases, SEA has considered general strategies that could be used to mitigate potentially significant impacts to land use and socioeconomics resulting from the proposed constructions and abandonments. The strategies would require the Applicants to:

- Realign, move, or modify the location of the proposed rail line segment construction to bring about consistency with local plans or to avoid or reduce the impact on prime farmlands.
- Create setbacks, buffers, or other provisions to accommodate the proposed construction activity within the locally affected area and in accordance with local regulations.
- Pay to relocate displaced businesses or residences or compensate for takings. This would be done pursuant tc state laws requirements governing payment of equitable compensation for such activities.

SEA has considered the following mitigation strategies for significant effects on land use and socioeconomics that would result from the proposed rail line segment abandonments:

- Encouraging offers to acquire rail lines that would otherwise be abandoned for continued rail freight service by other carriers under 49 U.S.C. 10904.
- Encouraging offers to acquire abandoned rail line segment corridors and property for acquisition use by public entities for possible light rail, intercity or commuter passenger rail services, or for a dedicated busway, recreational trail or other public use under the "public use" provisions of 49 U.S.C. 10905 and Section 8(d) of the National Trail Systems Act, 16 U.S.C. 1247(d).

## 3.17 ENVIRONMENTAL JUSTICE

Executive Order No.12898 directs Federal agencies to examine the effects of their actions on minority and low-income communities to ensure that all communities and persons live in a safe and healthful environment.<sup>4</sup> The Order directs agencies to follow existing law to ensure that when they act:

- · They do not discriminate on the basis of race, color, or national origin.
- They identify and address "disproportionately high and adverse human health or environmental effects" of their actions on minority and low-income populations.

<sup>&</sup>lt;sup>4</sup> The Order requires executive branch agencies, and requests independent agencies, to comply. See the Order dated February 11, 1994 and accompanying "Memorandum for the Heads of All Department: and Agencies."

 They provide opportunities for community input in the NEPA process, including input on potential effects and mitigation measures.

The Order charged the Council on Environmental Quality (CEQ) with the duty of developing guidance for Federal agencies on how to achieve these broad goals. CEQ has not issued final guidance, though it recently issued draft guidance.<sup>5</sup> The EPA, also, issued draft guidance, but this was intended for its own NEPA compliance analyses, not those of other Federal agencies.<sup>6</sup> Finally, the DOT issued an Order establishing procedures for applying the Executive Order to DOT programs.<sup>7</sup>

SEA used all four documents – the Executive Order, draft CEQ guidance, draft EPA guidance, and the DOT Order – to examine the environmental justice implications of the proposed Conrail Acquisition on minority and low-income communities. This analysis entailed six steps:

- 1. Identifying the potential health and environmental effects of the proposed acquisition.
- 2. Determining whether these potential effects might occur in minority or low-income communities.
- Assessing whether potential effects in minority or low-income communities could be "high" and "adverse."
- 4. Determining whether potentially high and adverse effects "disproportionately affect" minority or low-income communities. (In other words, determine whether such effects are predominately borne, more severely, or in greater magnitude, in a minority or low-income community.)
- If so, consulting with the affected minority or low-income community about alternatives and potential mitigation measures.
- 6. Identifying potential mitigation measures to avoid or reduce the disproportionate effect.

The following sections explain how SEA carried out each of the six steps in this analysis. Details on SEA's environmental justice definitions, methodology, and calculations are provided in Appendix K, "Environmental Justice."

62 Fed. Reg. 18377 et seq. (April 15, 1997).

<sup>&</sup>lt;sup>5</sup> "Draft Guidance for Considering Environmental Justice under the National Environmental Policy Act," CEQ, May 7, 1997.

<sup>&</sup>lt;sup>6</sup> "Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses," EPA, July 12, 1996.