

**STB Decision ID #28335**

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# **Environmental Assessment**

**Finance Docket No. 33388 (Sub No. 7)**

**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**

# **Norfolk Southern/Conrail Rail Connection—Bucyrus, Ohio**

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**DRAFT ENVIRONMENTAL ASSESSMENT  
FOR THE PROPOSED CONNECTION IN BUCYRUS, OHIO**

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## **EXECUTIVE SUMMARY**

This Environmental Assessment (EA) was prepared by the Surface Transportation Board's (Board) Section of Environmental Analysis (SEA) in accordance with the Board's orders in Decision No. 9, served on June 12, 1997, and Decision No. 12, served on July 23, 1997, in Finance Docket No. 33388. The EA describes the potential environmental impacts of a proposed new rail line connection between the existing Norfolk & Western Railway Company, a subsidiary of Norfolk Southern Railway Company (NS), and Conrail (Conrail) rail lines in Bucyrus, Ohio. The proposed construction site is surrounded by the existing NS and Conrail rail lines, businesses, residences, undeveloped properties, electrical utility lines, and a fuel distribution facility. Rail traffic on this connection is anticipated to average eight trains per day. According to NS, this construction would provide a new, more direct and efficient train route from Columbus, Ohio to eastern Ohio and western Pennsylvania, increase rail traffic capacity, improve service to shippers and reduce rail traffic congestion in Cleveland, Ohio.

After providing an overview of the proposed construction plan, this EA describes the different alternatives considered in developing that construction plan. It then addresses various aspects of the existing environment at the site of the proposed connection. Next, the potential environmental impacts of construction of the proposed connection are discussed. Finally, a summary is provided of agency comments which relate to the project, along with NS' responses to agency comments and explanations of mitigation measures proposed by NS, and SEA's recommended mitigation measures.

As shown in Table ES-1, potential environmental impacts related to the proposed project are insignificant or nonexistent. Based on its independent analysis of all the information available at this time, SEA concludes that the proposed project is not expected to have any significant adverse impact on land use, socioeconomics and environmental justice, transportation, safety, water resources, biological resources, air quality, noise, or energy. The proposed project would require the demolition of a former Toledo and Ohio Central (T&OC) freight depot, a potentially historic site, which is on private property. Coordination with the Ohio State Historic Preservation Office (SHPO) will be required to determine if the depot is eligible for the National Register of Historic Places (NRHP). Overall transportation and energy efficiency of the NS system will be improved by the construction of the connection.

The proposed project would require one new grade crossing and one expanded grade crossing. Warning devices (gates and flashing lights) would be installed at the new crossing. The warning devices (flashing lights) at the existing crossing would be upgraded from flashing lights to include gates.

Any increase in noise levels during construction would be limited to normal work hours and would only occur during the expected three to six month construction period.

**Table ES-1**  
**SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS**  
**PROPOSED RAIL CONNECTION AT BUCYRUS, OHIO**

Impact Type	Environmental Assessment Criteria	Evaluation of Criteria
Land Use	Length of Proposed Connection Length of New Right-of-Way Required Effect on Prime Farmland Effect on Coastal Zone Management Areas Effect on Parks, Forest Preserves, Refuges and Sanctuaries	2,550 feet 2,000 feet None None None
Water Resources	Effect on Groundwater Effect on Surface Water Effect on Wetlands	None None None
Biological Resources	Loss of Critical Habitat Effect on Threatened and Endangered Species	None None
Air Quality	Impact to Air Quality due to Construction	Negligible
Noise	Affected Sensitive Noise Receptors Within the Ldn 65 dBA Contour	61 residences
Transportation and Safety	Train Movement Over Connection New Grade Crossings Expanded Grade Crossings Effect on Transportation of Hazardous Materials	8 trains per day One One None
Cultural Resources	Effect on Sites Listed on the NRHP Effect on Sites Potentially Eligible for Listing on the NRHP Effect on Archaeological Sites	None One None
Energy	Changes in Fuel Consumption due to Construction Changes in Fuel Consumption due to Operation (gallons per year saved) Effect on Transportation of Energy Resources and Recyclable Commodities Overall Energy Efficiency Rail to Motor Carrier Diversions	Negligible 1.6 million None Improved None
Environmental Justice	High and Disproportionate Impact on Minority and Low-Income Groups	None

In summary, with the exception of the demolition of the potentially historic T&OC freight depot, no significant environmental impacts are expected from the proposed rail construction project. Although the potentially historic T&OC freight depot and associated district would be adversely effected, measures have been developed to mitigate the effect. The Section 106 consultation process is ongoing.

SEA concludes that the construction of the proposed rail line connection would not significantly affect the quality of the environment with the implementation of the mitigation measures set forth in this EA. Accordingly, SEA recommends that the Board impose the mitigation measures set forth in Section 5.3, as conditions in any final decision approving construction of the proposed rail line connection at Bucyrus, Ohio.

SEA specifically invites comments on all aspects of this EA, including the scope and adequacy of the recommended mitigation. SEA will consider all comments received in response to the EA in making its final recommendations to the Board. Comments (an original and 10 copies) should be sent to: Vernon A. Williams, Secretary, Surface Transportation Board, 1925 K Street, NW, Suite 700, Washington, DC 20423. Mark the lower left corner of the envelope: Attention: Dana White, Environmental Comments, Finance Docket No. 33388 (Sub Nos. 1-7). You may also direct questions to Ms. White at this address or by telephoning (888) 869-1997.

Date made available to the public: October 7, 1997

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# **CHAPTER 1**

## **Description of the Proposed Action**

CSX Corporation and CSX Corporation Inc. (CSX), Norfolk Southern Corporation and Norfolk Southern Railway Corporation (NS), and Conrail Inc. and Consolidated Rail Corporation (Conrail) have filed a joint application with the Board seeking authorization for the acquisition of Conrail by CSX and NS. The fundamental objective of the proposed acquisition is to divide existing Conrail assets and operations between CSX and NS. As a result, certain Conrail facilities and operations would be assigned individually to either CSX or NS through operating agreements or other mechanisms, and certain other existing Conrail facilities would be shared or operated by both CSX and NS. As a part of their joint application, CSX and NS have petitioned the Board to grant waivers which would allow the railroads to begin construction on a limited number of connections following an environmental review and approval of the constructions, but in advance of a final ruling on the primary transaction.

A connection at Bucyrus, Ohio is proposed to integrate the Conrail lines into the NS system. This Environmental Assessment (EA) has been prepared by SEA to determine whether early construction of the proposed connection would have any significant impacts to the human and natural environment.

Relevant government agencies were consulted for their comments on environmental issues, permit requirements, and necessary approvals related to the project. A sample letter, a list of the agencies to whom a letter was sent, and the agency responses are included in Appendix C.

### **1.1 OVERVIEW OF THE PROPOSED RAIL CONNECTION**

#### **1.1.1 Location and Description**

The City of Bucyrus, in Crawford County, Ohio, is approximately 70 miles north of the City of Columbus, Ohio. The new project would connect the existing north/south NS main line between Bellevue, Ohio and Columbus, Ohio to the existing east/west Conrail main line between Crestline, Ohio and Fort Wayne, Indiana. The connection would provide a new, more efficient route from Columbus, Ohio to eastern Ohio and western Pennsylvania by increasing rail traffic capacity and improving service to shippers. NS' objectives are to construct a connection which will permit safe and efficient train operations while minimizing curvature and minimizing potential impacts on area residences. According to NS, without the proposed connection, the NS traffic would have to be routed through Cleveland and Bellevue to reach Columbus, a more circuitous (approximately 70 miles longer), rail-congested, and populated route.

The proposed action at Bucyrus, Ohio would involve the construction, operation, and maintenance of a new connection between existing Conrail and NS rail lines (Figure 1.1). A southeast quadrant connection is proposed consisting of approximately 2,550 feet of new track. The point of divergence from the NS rail line would be just south of the existing East Warren Street grade crossing (DOT ID# 481564K), approximately 4,630 feet north of NS milepost S-62. The point of divergence from the Conrail rail line would be approximately 200 feet west of the existing Whetstone Street grade crossing (DOT ID# Not Available).

The proposed connection would be southeast of the existing Conrail and NS crossings and would occupy approximately 4.6<sup>1</sup> acres (1.5 acres to be utilized by new track). Approximately 1,750<sup>1</sup> feet of the new rail line would be located in either Conrail's or NS' existing rights-of-way. The remaining approximately 800<sup>1</sup> feet of new rail line would be located on private property for which NS is negotiating rights to allow construction and operation.

The construction site is in an urban area bordered on the north by the existing Conrail line between Crestline, Ohio and Fort Wayne, Indiana, on the southeast by businesses and residences, and on the west by the existing NS line between Bellevue, Ohio and Columbus, Ohio. A narrow strip of deciduous trees and shrubs separates Conrail's east/west-oriented right-of-way and the residences to the south. East/west-oriented railroad overhead communication lines border the north side of Conrail's existing tracks and north/south-oriented electric power lines border the east side of NS' existing track. Two abandoned utility poles stand in a vacant lot between East Warren Street and Woodlawn Avenue where the proposed connection (the preferred route) diverges from the existing north/south-oriented NS track. A British Petroleum (BP) fuel distribution facility with five above-ground storage tanks is 200 feet east of the proposed construction. There are 144 residences within 500 feet to the north, west, and southeast of the proposed construction site.

### **1.1.2 Changes in Rail Traffic**

There are currently 26 trains traveling along the NS line. This will increase to 34 with the new connection. Conrail currently has 6 trains traveling along their line which will increase to 14 with the new connection. Eight trains per day will operate over the new connecting track.

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<sup>1</sup> Additional design work has been completed since submission of the initial Environmental Report on June 23, 1997. Some specific parameters such as acreage and length of track have been updated in this EA.

### 1.1.3 Construction Requirements

The proposed construction site is in the eastern half of the City of Bucyrus, Ohio, southeast of the intersection of the existing Conrail and NS tracks. This urban site consists primarily of commercial lots surrounded by residences. The commercial lots are mainly disturbed, containing either ballast and fill dirt or weeds, grasses, shrubs, and a few small deciduous trees. A narrow strip of deciduous trees and shrubs separates the existing Conrail rail right-of-way from residences to the south. The construction area is bordered on the north by the Crestline, Ohio to Fort Wayne, Indiana Conrail line and on the west by NS' Columbus to Bellevue line. A BP fuel distribution facility with five above-ground storage tanks is east of the proposed construction site. A former Toledo & Ohio Central Railroad (T&OC) passenger station, now occupied by a heating and plumbing company, is northwest of the project area.

The proposed construction would affect three properties. Two of the properties are owned by Conrail but are leased and occupied by the Quinn Brothers Construction Company. A storage yard for construction materials and a one-story frame office building are on these two properties. The third property is owned and occupied by the Quinn Brothers Construction Company. The former T&OC freight depot is on this property and is used as a warehouse by the construction company. Both the office building and the former freight depot would have to be demolished to construct the proposed connection. The storage yard would be cleared. NS will construct a natural or man-made visual buffer to the west of a residential property located within 32 feet of the proposed right-of-way to separate rail operations. No other modifications to existing structures would be required. The north/south-oriented electric power lines east of the existing NS rail line would not need to be raised or relocated.

NS' construction specifications and procedures meet or exceed the practices recommended by the American Railway Engineering Association (AREA). The entire length of the proposed connection would involve new construction. Second-hand rail and other track materials (OTM) may be used where practicable. A new subgrade, subballast, ballast, and ties would be used for the roadbed. The design specifications for the project are set out in Table 1-1. A typical cross-section is provided in Figure 1.2.

The topography along the proposed connection is generally level. Only minor grading would be required to prepare the roadbed and ditches east of Rensselaer Street. Fill would be required west of Rensselaer Street to transition to the height of the existing Conrail roadbed. No grading, drainage, or erosion control permits would be required. Grading activities typically consist of:

- removal and disposal of vegetative and non-vegetative debris;
- excavation and compaction of existing material to achieve desired subgrade elevation in cut sections (6,100 cubic yards of excavation);
- placement and compaction of borrow material as required to achieve desired subgrade elevation in fill sections (475 cubic yards);
- placement of compacted subballast layer upon finished subgrade;
- recontouring of property and ditches as required to ensure drainage; and
- seeding and mulching of all areas in which existing ground is disturbed.

**Table 1-1  
Design Specifications for the Bucyrus, Ohio Connection**

Maximum train speed	25 miles per hour
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**Table 1-1  
Design Specifications for the Bucyrus, Ohio Connection**

Maximum curvature	10 degrees, 0 minutes
Maximum grade	0.90 percent
Minimum weight of rail	136 pounds per yard
Tie lengths	8 feet, 6 inches
Grade of ties	4 and 5
Ties per mile	3,168
Ballast depth	12 inches
Minimum subballast depth	12 inches
Minimum subgrade width	32 feet
Minimum depth of ditches	1 foot, 0 inches
Maximum side slopes	2 horizontal : 1 vertical
Maximum cut	4.1 feet
Maximum fill	5.3 feet

The width of the new right-of-way for the proposed connection would be approximately 40 feet. The proposed additional track would be centered on the right-of-way. On the Conrail right-of-way, the proposed track would be parallel to and spaced at a perpendicular distance of 15 feet from centerline to centerline for approximately 1,000 feet and then would connect with the Conrail line 200 feet west of Whetstone Street.

The proposed connection would not cross any streams or wetlands, nor would any residences need to be removed as a result of the proposed project. NS would need to acquire rights to cross three properties and remove structures and materials associated with the Quinn Brothers Construction Company (which leases two of the properties and occupies all three). The structures that would be removed include the company office (a one-story frame building located in the construction yard) and a warehouse (the former T&OC freight depot).

The proposed connection would cross Rensselaer Street and East Warren Street. The existing East Warren Street NS at-grade crossing would be expanded to accommodate the proposed track, and the crossing protection would be upgraded to include gates and flashing lights. A new at-grade crossing would be constructed at Rensselaer Street approximately 300 feet east of the existing NS crossing on Rensselaer Street. Protective devices at both the existing NS crossing and the new proposed crossing would include gates and flashing lights.

The exact labor force required and the duration of construction have not been determined, but the project is expected to require 10 to 15 people and three to six months to complete. It is expected that the work would be done during normal working hours. Borrow material for the project would be

obtained from local sources and hauled to the construction site by rail or truck. This borrow material would be obtained according to the appropriate regulatory permitting controls once borrow pits are identified prior to construction. It is planned that a majority of the construction activities would be performed by qualified contractors working for NS. The project would be advertised in recognized trade journals and bids solicited in accordance with NS' Corporate Standard Procedures. The contractor could hire new or additional employees specifically for the project.

Portions of the track and signal work would be performed by NS' existing Maintenance of Way and Structures (MW&S) and Signal and Electrical Department maintenance and construction crews. No new NS positions are anticipated to be created specifically for this project.

Construction of the proposed connection would not require raising or relocating any electric power lines or underground utilities.

#### **1.1.4 Operation**

Approximately eight trains per day would be expected to operate over the proposed connection. Traffic on the connection would be expected to include approximately three general merchandise trains per day each way, a local train (six days a week), an auto train (six days a week), about two through trains per day, and one coal train a week. Train movements on the line could occur seven days a week during the day or night. Dispatching of trains would be dependent upon train availability and traffic on the area rail system.

#### **1.1.5 Maintenance**

Track inspections would be performed as outlined in NS' MW&S Standard Procedure #380, and the Federal Railroad Administration (FRA) Track Safety Standards. All connections would be classified and maintained as main track, meaning they would be inspected a minimum of two times per week as specified by the FRA. Additional inspections would be performed whenever specific conditions warrant them. Track inspection would be performed only by qualified personnel who meet the requirements set forth by the FRA in Section 213.7 of the Track Safety Standards.

The proposed connection would become part of NS' main track network, and be maintained as a main track. NS maintains its tracks such that they meet or exceed all FRA safety standards. NS uses scheduled maintenance programs for the continual maintenance of all track segments based on tonnage handled. These programs are supplemented by additional "spot" maintenance activities to correct any deficiencies from the NS maintenance standards should they develop.

As part of NS' track maintenance program, the zone consisting of the rail, ties and the immediately adjacent ballast section is treated with herbicides on a yearly basis. The elimination of vegetation from the track structure and roadbed section is required by FRA and desirable for track maintenance reasons and to provide a safe working environment for NS transportation and maintenance employees.

NS uses only U.S. Environmental Protection Agency (EPA)-approved general use herbicides (i.e., herbicides approved by EPA as safe for use by the general public). Application is performed by fully-licensed personnel provided to NS by licensed firms working under multi-year contracts. NS personnel familiar with specific locations accompany these contractors at all times. Application is by spray-bars mounted on rail bound equipment or hy-rail vehicles. The application width is normally 12 feet on either side of the centerline of the track. This width is reduced or eliminated as required by local conditions such as water courses, protected vegetation or structures.

## **1.2 PURPOSE AND NEED FOR THE PROPOSED CONNECTION**

The purpose of this environmental review is to identify, analyze, and disclose the environmental issues and potential impacts associated with the early construction of the rail line connection at Bucyrus, Ohio. Based on the Application filed by CSX and NS, this connection would serve to improve the service capabilities and operating efficiencies of each railroad. These efficiencies include enhanced single-line service, reduced travel times, and increased utilization of equipment. NS intends to begin operations on this connection immediately after the approval of the entire acquisition transaction. This EA is being prepared to determine whether the Board should grant approval to construct the connection before there is a decision on the entire transaction. If approved by the Board, this connection would be constructed in anticipation of the Board approval (or disapproval) of the acquisition of Conrail by CSX and NS. If the entire transaction is approved by the Board, this connection would be available for service immediately. If the transaction is not approved, or approved with conditions which preclude the use of this connection, operation on this connection would not be allowed. NS accepts the risk that use of this connection is predicated on Board approval of the entire transaction.

## **1.3 RELATIONSHIP TO THE PROPOSED TRANSACTION**

On April 10, 1997, CSX, NS, and Conrail filed their notice of intent to file an application seeking the Board's authorization for: (1) the acquisition by CSX and NS of control of Conrail, and (2) the division of Conrail's assets. On May 2, 1997, CSX and NS filed petitions seeking a waiver of the Board's regulations that provide that all "directly related applications, e.g., those seeking authority to construct or abandon rail lines..." be filed at the same time. 49 CFR 1180.4(c)(2)(vi) (Appendix A). The waiver would allow CSX and NS to seek the Board's authority to construct and operate seven rail line connections (four for CSX and three for NS) prior to the Boards' decision on the acquisition and division of Conrail.

The seven constructions are each relatively short connections between two rail carriers and which have a total length under four miles. According to the railroads, much of the construction on these short segments would take place within existing rights-of-way. CSX and NS stated that these seven connections must be in place before the Board's decision on the primary application in order for them to provide efficient service in competition with each other. Without early authorization to construct these connections, CSX and NS contended, each railroad would be severely limited in its ability to serve important customers.

In Decision No. 9 served June 12, 1997, the Board granted CSX's and NS's petitions (Appendix B). The Board stated that it understood the railroads' desire to "be prepared to engage in effective, vigorous competition immediately following consummation of the [acquisition]". In granting the waiver, the Board noted that the railroads were proceeding at their own risk. If the Board were to deny the primary applications, any resources expended by CSX and NS in building the connections would be of little benefit to them.

Both the railroads and the Board recognized that no construction could occur until the Board completed its environmental review of each of the construction projects. Thus, the Board stated that it would consider the environmental aspects of these proposed constructions and the railroads' proposed operations over these lines together in deciding whether to approve the physical construction of each of these lines. The operational implications of the merger as a whole, including operations over the roughly four miles of line embraced by the seven connections projects, will be examined in the Environmental Impact Statement being prepared for the overall merger. That document will be available for a 45-day public comment period in late November 1997.

In order to fully consider the environmental aspects of the seven proposed constructions, the Board required both CSX and NS to file certain information on the environmental effects of the construction and operation of these projects. The railroads complied with this requirement on September 5, 1997 and submitted detailed Preliminary Draft Environmental Assessments (PDEA) for each of the seven projects.

SEA has independently verified the information contained in each PDEA, conducted further independent analysis, and developed appropriate environmental mitigation measures. Its findings are set forth in this EA. SEA is now seeking your comments on this EA. Comments must be submitted to the Board by October 27, 1997.

#### **1.4 SEA ENVIRONMENTAL ASSESSMENT PROCESS**

This EA is necessary to ensure that the proposed action complies with the statutory requirements under the National Environmental Policy Act (NEPA), the Board's environmental regulations (49 CFR 1105), and other applicable rules and/or regulations. The Board's SEA is responsible for conducting NEPA environmental review.

The Board has adopted the former Interstate Commerce Commission (ICC) environmental regulations (49 CFR Part 1105) that govern the environmental review process and outline procedures for preparing environmental documents. Section 1105.6(b) of these regulations establish the criteria which identify the types of actions for which an EA would be prepared. The construction of rail line connections, like the action proposed here, are classified under the Board's regulations as normally requiring preparation of an EA. SEA reviewed the proposed rail construction and determined that because the connection is not expected to result in significant environmental impacts, an EA should be prepared.

In preparing the EA, SEA identified issues and areas of potential environmental impact, analyzed the potential environmental impacts of the proposed rail line construction project, reviewed public comments, and developed mitigation measures to avoid or reduce anticipated impacts on the environment. To assist it in conducting the NEPA environmental analysis and in preparing the EA, SEA selected and approved HDR Engineering, Inc. to act as the Board's independent third party consultant as provided for in 49 CFR Part 1105.10(d). NS retained the independent third party consultant who worked solely under SEA's direction and supervision and assisted SEA in conducting environmental analyses related to the proposed merger.

SEA analyzed the Environmental Report and Operating Plan that accompanied the transaction application, technical studies conducted by NS's environmental consultants, and the PDEA prepared as a part of the waiver application. In addition, SEA conducted its own independent analysis of the proposed construction, which included verifying the projected rail operations; verifying and estimating noise level impacts; estimating air emission increases; performing land use, habitat, surface water, and wetland surveys; conducting ground water analyses; assessing impacts to biological resources; and performing archaeological and historic resource surveys. In addition, SEA and/or its independent third party consultant conducted consultations with NS and their environmental consultants and made site visits to the proposed rail line construction site to assess the potential impacts on the environment.

## **CHAPTER 2**

### **Alternative Actions Considered**

This chapter outlines the alternatives considered for the proposed connection.

#### **2.1 NO-ACTION ALTERNATIVE**

In its environmental review, SEA considered a “no-action” alternative. Under this alternative, current operations would continue to move over existing NS and Conrail rail lines. However, as outlined below, access between the two lines would be limited to existing connections, interchanges, or terminals.

If the “no-action” alternative were implemented, the proposed connection would not be constructed and trains would not be rerouted. None of the potential environmental impacts associated with construction would occur. However, neither would the benefits of the project be realized. According to NS, in the absence of the proposed connection, trains traveling from Columbus, Ohio to eastern Ohio and western Pennsylvania would have to go through Cleveland and Bellevue, Ohio a more circuitous (by approximately 70 miles), rail-congested, and populated route. This alternative would not provide the full operational, environmental and economic benefits, including added rail capacity and improved service to shippers, possible through the proposed connection.

#### **2.2 BUILD ALTERNATIVES**

SEA identified no feasible alternatives to new construction for the Bucyrus site. The study team considered variations of alignments; however, none were reasonable or technically feasible and were not developed further as alternatives. Two build alternatives were further evaluated based on consideration of the constraints unique to the proposed project area (Figure 2.1). A description of the location of each alternative route follows.

Alternative A, the preferred connection, would diverge to the north-northeast from the existing north/south NS rail line approximately 450 feet north of Woodlawn Avenue. Alternative A would cross East Warren Street, resulting in an expanded grade crossing. Alternative A would continue to the northeast and cross Rensselaer Street approximately 230 feet east of the existing NS grade crossing (resulting in a new at-grade crossing). Alternative A would cross the property where the former T&OC freight depot stands, curve to the northeast, pass through the Quinn Brothers Construction Company yard, curve to the east and parallel the existing Conrail line for approximately 1,000 feet, and then connect with the Conrail line 200 feet west of Whetstone Street. The former T&OC freight depot and Quinn Brothers Construction Company one-story office building on the north side of Rensselaer Street would be demolished. The construction company’s storage yard, where the office building is also located, would be cleared. Alternative A would not require the removal or relocation of any residences.

An alternative alignment for the connection, Alternative B, is located southeast of the existing Conrail and NS crossing and would encompass an area approximately 2,780 feet by 100 feet. It would diverge from the existing north/south NS track about 400 feet south of Alternative A and about 50 feet north of Woodlawn Avenue. As this alternative extends northeast, it would cross East Warren Street,

resulting in a new at-grade crossing. This alignment would not require the demolition of the T&OC freight depot; however, a recent addition to the freight depot would be removed.

Continuing northeast, Alternative B would cross the northwest edge of a residential property. Alternative B would then cross Rensselaer Street resulting in a second new at-grade crossing. The Quinn Brothers Construction Company office building, on the north side of Rensselaer Street would be demolished. The construction company's storage yard, where the office building is also located, would be cleared. Alternative B would continue to curve eastward and cross the north side of a residential property before aligning parallel with the existing east/west Conrail rail line. Alternative B would continue to parallel the east/west Conrail rail line until the rail lines converge at a point approximately 200 feet west of the Whetstone Street at-grade crossing. Alternative B was rejected because it would result in the removal of two residences in the right-of-way.

### **2.3 SELECTION OF PROPOSED CONNECTION LOCATION**

Several factors influenced the establishment and location of alternative alignments. These factors included the location of existing rail facilities in the area, the location of other manmade structures (roadways, businesses, and residences) and engineering considerations (minimum curve, approach and connection to existing rail lines). Table 2-1 provides a comparison of the two alternatives. The table includes a list of various environmental factors used to evaluate the potential impacts of the alternatives.

The purpose of the proposed project is to provide a competitive alternative for NS customers in eastern Ohio and western Pennsylvania by increasing rail capacity and improving service to shippers. The "no-build" alternative would not facilitate competition or reduce train traffic through Cleveland and Bellevue, as would the "build" alternatives. Consequently the "no-build" alternative was dropped from consideration because it would force trains to take a longer, more congested and populated route.

Preliminary studies determined that both build alternatives were feasible from economic and engineering perspectives. The evaluation also addressed the potential social and environmental impacts of the alternatives. Both alternatives would affect the same community, i.e., the same census block. Consequently, there would be no difference between the alternatives in the racial or economic composition of the population affected. Potential alternative alignments for the proposed project are limited primarily by the residential and commercial properties in the area.

As shown in Table 2-1 and Figure 2.1, the two alternatives are comparable for many of the criteria investigated. The alternatives differ in total length, degree of curvature, the number of residences within the right-of-way, and the amount of residential and industrial land crossed. The proposed connection avoids removing any residences, while the alternative alignment would require the removal of two residences. The nearest residence to the proposed connection is 32 feet south of the proposed right-of-way. Two residences would have to be demolished for the alternative alignment because they would be in the right-of-way of the alternative alignment. No churches, schools, libraries, hospitals, or retirement homes are within the right-of-way of the proposed connection. The only structures within the proposed right-of-way are the former T&OC freight depot and the one-story office building.

**Table 2-1  
Comparison of the “Build” Alternatives for Bucyrus, Ohio Rail Connection**

Feature	Unit	Alternative	
		A	B
Length of Alignment	feet	2,550	2,725
Curvature	degrees	10-0	12-0
Land Use Crossed:			
Agricultural	feet	0	0
Woodland (including shrub/scrub habitat)	feet	0	0
Residential	feet	0	100
Industrial	feet	2,550	2,625
Prime Farmland Soil Crossed			
Prime in Native State	feet	0	0
Prime if Drained	feet	0	0
Waterway Crossings	number	0	0
	feet	0	0
Forested Wetland Crossed	feet	0	0
100-year Floodplain Crossed	feet	0	0
Endangered Species Habitat Crossed	feet	0	0
Critical Habitat Crossed	feet	0	0
Road Crossings:			
State Highways	number	0	0
City Roads ( paved two-lane)	number	2	2
-upgraded crossings	number	1	0
-new crossings	number	1	2
Private Roads	number	0	0

**Table 2-1  
Comparison of the “Build” Alternatives for Bucyrus, Ohio Rail Connection**

Feature	Unit	Alternative	
		A	B
Residences/Businesses			
Within Right-of-Way			
Residences	number	0	2
Businesses	number	2	1
50-100 Feet from Centerline			
Residences	number	3	3
Businesses	number	3	3
100-500 Feet from Centerline			
Residences	number	144	154
Businesses	number	5	6
Affected Sensitive Noise Receptors within the Ldn 65 dBA	number	61	67
Traffic at Road Crossings			
Rensselaer Street	vehicles/day	2,294	2,294
East Warren Street	vehicles/day	1,955	1,955
Loaded School Bus Traffic at Crossings	number/day	0	0
Transmissions Corridor Crossings	number	1	1
Known Cultural Resource Sites	number	1	0
Nearest Recreational Area	feet	2,000	2,000
Nearest Residence	feet	32	2 in right-of-way
Nearest Church	feet	1,000	1,000
Nearest School	feet	1,400	1,400
Nearest Hazardous Waste Site	feet	200	100

Alternative A was selected as the preferred route because it has the shorter length, provides greater operating efficiency, and does not require the removal of residences. In addition, Alternative A affects only business property, is further from the nearest hazardous waste site, affects fewer noise receptors, is farther from the nearest residences and has fewer new road crossings (one versus two). While Alternative A requires demolition of the former T&OC freight depot, this impact would be mitigated through documentation (recommended at Historic Architectural Building Survey (HABS) Level II) of the existing structure.

The proposed rail line would be the most direct connection between the existing rail lines and would minimize the use of new land outside the NS and Conrail rights-of-way. There are no construction, operational, or environmental features that would render another alignment of the proposed rail line connection more reasonable than the proposed location.

## **CHAPTER 3**

### **Existing Environment**

This chapter provides an overview of the existing environment in the vicinity of the proposed construction.

#### **3.1 LAND USE**

##### **3.1.1 Current Land Use and Zoning**

The project area is within the City of Bucyrus in Crawford County, Ohio. Approximately 75 percent of the land in Crawford County is cultivated; an additional ten percent of the county consists of woodlands and windbreaks. Neither the City of Bucyrus nor Crawford County has zoning ordinances.

The preferred alternative would require 4.6 acres of land (of which only 1.5 acres would be occupied by track). Land use for the area around the proposed construction site in Bucyrus is mainly residential and commercial. The project site is bordered on the east by Catherine Street, on the north by the existing Fort Wayne, Indiana to Youngstown, Ohio Conrail line, on the west by the existing Bellevue to Columbus NS line, and to the southeast by residences and a narrow strip of deciduous trees and shrubs along Conrail's existing right-of-way. The trees and shrubs are between the existing Conrail right-of-way and residences to the south. East/west-oriented overhead communication lines border the north side of the existing Conrail line. North/south-oriented electric power lines border the east side of the existing NS line north of East Warren Street. Two abandoned utility poles stand in a vacant lot between East Warren Street and Woodlawn Avenue at the southwestern end of the construction site.

East of the construction site are vacant and commercial lots. The vacant lots are characteristic of disturbed areas and consist of either ballast and fill dirt, or weeds, grasses, deciduous trees, and shrubs. The commercial lots, associated with a former T&OC passenger station and a former T&OC freight depot, contain gravel ballast and fill dirt or weeds, grasses, shrubs, and a few, small deciduous trees. The former T&OC passenger station, presently occupied by a heating and plumbing company, is southeast of the Conrail and NS intersection, northwest of the proposed construction site. The former T&OC freight depot, presently owned and occupied by Quinn Brothers Construction Company, is on the east side of the NS track between Rensselaer Street and East Warren Street. The Quinn Brothers Construction Company yard and one-story office building are between Rensselaer Street and the Conrail track.

A BP fuel distribution facility with five above-ground tanks is 200 feet east of the proposed construction. There are 144 residences within 500 feet to the north, west, and southeast of the proposed construction site.

##### **3.1.2 Consistency with Local Plans**

Neither the City of Bucyrus nor Crawford County have zoning ordinances.

### 3.1.3 Prime Farmlands and Coastal Zones

All of the construction site is within areas of previously disturbed soils. The proposed project would cross two soil types -- Urban land and undulating Bennington-Urban land complex. Neither of these soils are considered prime farmland or hydric soils. However, the Bennington-Urban land complex could have hydric components where depressions and flats occur (SCS, Crawford County, 1979). The Bennington-Urban land complex is a somewhat poorly drained soil that has a moderately slow or slow permeability (SCS, Crawford County, 1979).

None of the project area is within a coastal zone.

## 3.2 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

In order to study the effects of the proposed construction on the population in the vicinity of the project, information on racial composition and average income level in the area was obtained from the U.S. Census Bureau TIGER/Line files and other statistical sources. From the Census files, the proposed construction was determined to be contained in one census block (974600). Using the census block number, Summary Tape Files were utilized to determine and analyze the poverty status, race and income for the relevant block.

### 3.2.1 General County Information

The proposed project is in Crawford County, Ohio. The entire route would be within the city limits of Bucyrus, Ohio. Bucyrus is an incorporated city with a 1994 population of 13,198. It is the largest city in Crawford County and the county seat. Population data for Bucyrus are provided below in Table 3-1. The Bucyrus population has decreased 2.2 percent between 1990 and 1994.

**Table 3-1**  
**Population of Bucyrus, Ohio**

	1990	1991	1992	1993	1994
<b>Population</b>	13,496	13,441	13,278	13,237	13,198

Population, employment and income trends from 1980 to 1993 for Crawford County and the State of Ohio are provided in Table 3-2. The population of Ohio increased 2.7 percent from 1980 to 1993. The population in Crawford County decreased 4.4 percent from 1980 to 1990. The average number of persons in each household in Crawford County in 1990 was 2.57 (U.S. Department of Commerce, County and City Data Book, 1994).

**Table 3-2  
Population, Employment and Income Trends for  
Crawford County and the State of Ohio**

	Crawford County		Ohio		
	1990 <sup>1</sup>	1980 <sup>1</sup>	1993 <sup>2</sup>	1991 <sup>2</sup>	1980 <sup>2</sup>
Population	47,870	50,075	11,091,000	10,940,000	10,798,000
Labor Force	22,627	22,783	5,489,000	5,440,000	5,086,000
Employed	20,790	20,451	5,132,000	5,094,000	4,660,000
Unemployed	1,837	2,332	357,000	346,000	426,000
Percent Unemployed	8.1	10.2	6.5	6.4	8.4

<sup>1</sup> = County and City Data Book, 1994 and 1990; <sup>2</sup> = Statistical Abstract of the United States, 1980, 1990, and 1994.

The 1989 median household income in Crawford County was \$24,981 (U.S. Department of Commerce, County and City Data Book, 1994). In 1995, the unemployment rate in Crawford County was 6.0 percent, slightly higher than the state unemployment rate of 5.5 percent.

Agricultural production is important to the economy of Crawford County. More than 90 percent of Crawford County is farmland (75 percent of which is cultivated). The principal crops are corn, soybeans, wheat, oats, and hay. Hogs, beef cattle, sheep, dairy cattle, and poultry are important livestock raised in Crawford County. Employment by industry, in 1990, for Crawford County is listed below (Table 3-3).

**Table 3-3  
1990 Employment by Industry for Crawford County, Ohio**

Industry	Percent Employed
Agriculture, forestry and fisheries	5.85
Construction	5.29
Manufacturing	29.84
Transportation	3.29
Trade	17.63
Finance, insurance and real estate	5.06
Services	23.36
Government	9.43
Mining	0.25

### 3.2.2 Information on the Area Surrounding the Proposed Connection

As seen in the table below (Table 3-4), the area surrounding the proposed connection, i.e., the relevant census block, has a lower percentage of minority residents than the City of Bucyrus does on average. Data on economic levels in the area indicate that the population of the relevant census block is more prosperous than that of the city as a whole. Census data indicate that the percentage of people living below the federal poverty level in the census block is lower than the city average and median household incomes in the same area are higher than the city average.

**Table 3-4  
1990 Racial and Economic Composition of the City of Bucyrus  
and the Area Surrounding the Proposed Connection**

<b>Proposed Bucyrus Connection</b>			
		<b>City of Bucyrus</b>	<b>Proposed Connection</b>
Racial data (percentages)	White	99.06	99.5
	Black	0.22	0
	Asian	0.38	0.2
	Native American	0.27	0.2
	Hispanic and other	0.07	0.1
Economic data	Median Household Income	\$22,023	\$23,553
	Percent Below Federal Poverty Level	15.5	11.8

### 3.3 TRANSPORTATION SYSTEMS

#### 3.3.1 Existing Rail Transportation Network

The existing rail transportation network in the project vicinity consists of a north/south NS track that crosses the east/west Conrail track. A total of 26 trains per day currently operate over the NS rail line, and 6 trains per day currently operate over the Conrail rail line. Existing local roads in the vicinity include Rensselaer Street, East Warren Street, Whetstone Street, Highland Avenue and Catherine Street.

### **3.3.2 Grade Crossings**

The existing NS rail line crosses East Warren Street and Rensselaer Street. The existing Conrail rail line crosses Whetstone Street at grade and Highland Avenue via an overpass.

Average Daily Traffic (ADT) calculated from August 1994 data for a segment of East Warren Street between Lane and Whetstone Streets indicated ADT of 1,955 vehicles per day (vpd). ADT from August 1995 calculated for a segment of East Rensselaer Street between South Sandusky Street and Highland Avenue was 2,294 vehicles per day. Neither of these grade crossings exceeds an ADT of 5,000 vpd. The study team concluded that for highways with ADT volumes below 5,000 vpd, the potential effect of increased train traffic would be experienced by very few drivers and the additional vehicular delay would be minimal.

## **3.4 SAFETY**

### **3.4.1 Hazardous Waste Sites**

Review of the appropriate environmental data bases by Environmental Data Resources, Inc. (EDR) indicated that there were two Ohio Spills sites and one State Inventory of Leaking Underground Storage Tanks (LUST) site within 0.25 mile of the proposed construction corridor. The two Ohio Spills sites included a diesel fuel spill at the BP Oil Company located at 720 East Warren (adjacent to the proposed construction site) and an ammonia spill at the Ridgedon Farms facility located at 323 Wiley Street. The LUST site was identified as the Anchor Swan facility located at 416 East Mansfield Street. None of these sites are expected to be impacted by the proposed construction because of their distance from the construction site and the minimal subsurface disturbance would be restricted to the proposed construction site.

The Quinn Brothers Construction Company yard on the proposed construction site was not listed in any of the searched databases. However, the possibility of environmental contamination at the site cannot be eliminated. If contamination is encountered during construction, proper response and remediation will be implemented.

No other hazardous waste sites or known environmental conditions, (e.g., National Priorities List (NPL); Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); Treatment, Storage, or Disposal Sites (TSD); Emergency Response Notification System (ERNS); State Priority List (SPL); or State Inventory of Solid Waste Facilities (SWFLF)) were identified in the vicinity of the proposed connection. The EDR database search revealed ten unmappable sites within the city limits of Bucyrus. These sites could not be located because of poor address or geocoding information provided to the state and/or federal databases. However, no evidence of a hazardous waste site was observed within the proposed construction area during a site visit.

### 3.4.2 Transportation of Hazardous Materials

Systemwide, approximately 5.6 percent of NS traffic is composed of hazardous materials. Train operation always involves a possibility for train accidents or incidents. However, NS' track and equipment inspection and maintenance programs, employee training programs and the low speed of the trains over the connection would minimize this potential.

#### 3.4.2.1 Carrier's Safety Practices

Train accidents involving damage as low as \$6,300 must be reported to the Federal Railroad Administration (FRA). The number of FRA-reportable train accidents per million train-miles for NS for 1991 through 1995 are listed in Table 3.5.

**Table 3-5  
Norfolk Southern Train Accident Rates per Million Train Miles**

<b>Year</b>	<b>Rate</b>
1991	2.86
1992	2.65
1993	2.23
1994	1.97
1995	1.93

In 1995, NS' train accident rate was 1.93 accidents per million train miles, approximately half the national average rate of 3.71 accidents per million miles for Class I railroads.

Safe transportation protects the resources of the customers and communities served as well as the resources of the railroad. NS has independently adopted proactive programs to improve the safety of hazardous materials transportation. This action has resulted in superior safety records for NS compared to industry averages.

As part of their efforts to continually improve safety performance in transportation, NS is involved in Responsible Care® Partner. The Responsible Care® program was established by the Chemical Manufacturers Association (CMA) in 1988 as a proactive self-regulating approach to improving health, safety and environmental performance. The Responsible Care® Partnership program extends Responsible Care® requirements to non-CMA members including transportation companies which apply to join. Partners must align internal management practices to meet or continuously improve toward meeting established codes. The codes include: Community Awareness and Emergency Response; Process Safety; Pollution Prevention; Safe Distribution; Employee Health and Safety; and Product Stewardship.

NS has committed to this proactive effort with its CMA customers to improve the safe transportation of chemicals and hazardous materials. NS would continue to transport all hazardous materials in compliance with the U.S. Department of Transportation (DOT) Federal Hazardous Materials Regulations (49 CFR Parts 171, 172, 173, 178, 179, 180, and 185).

NS' environmental policy requires employees to understand and comply with environmental requirements. To assure that NS employees are aware of individual and corporate responsibilities for protection of the environment, NS implemented environmental awareness training for all employees. NS regularly provides hazardous materials training for all employees with duties related to hazardous materials transportation. NS is involved with local communities in providing training for fire, police and emergency response departments. NS is also involved in community outreach programs. NS has received numerous safety and service awards, including the Harriman Gold Safety Award, the highest safety honor for railroads, for the last eight years.

#### **3.4.2.2 Carrier's Safety Record Regarding Hazardous Materials**

Currently, 5.6 percent of NS' systemwide traffic consists of hazardous materials, representing a total of about 255,000 carloads in 1996. During the same year, NS had a company record low total of 90 DOT F 5800.1 reportable incidents, mostly minor in nature. Over 99.96 percent of the hazardous materials shipments arrived at their destination without incident.

These hazardous material shipments were moved primarily on routes designated as key routes (NS defines these as routes with annual hazardous materials traffic exceeding 9,000 carloads. This definition is more restrictive than the Inter-Industry Task Force Recommendations). In 1995, NS key routes consisted of 6,423 miles.

The north/south-oriented NS rail line through the City of Bucyrus is a NS key route transporting between 10,000 to 20,000 loads of hazardous materials annually. The east/west-oriented Conrail rail line through the City of Bucyrus is a Conrail key route transporting over 10,000 loads of hazardous materials annually.

#### **3.4.2.3 Emergency Action Plans**

NS developed and maintains corporate and divisional Emergency Action Plans based on the principles of Prevention, Preparedness, Response and Remediation. In the event of a hazardous material incident, NS implements its Emergency Action Plans.

##### ***Prevention***

Prevention of incidents is NS' primary challenge, with a goal of zero incidents. Prevention efforts include: hazardous materials training of employees; compliance with regulations, operating rules, safety rules and industry recommended operating practices; maintenance of the railroad's infrastructure and equipment; and risk assessment to target and prioritize opportunities to improve performance.

### ***Preparedness***

Preparedness to respond includes: distribution and maintenance of the written response plans, instructions, guidelines and contact lists of agencies, personnel and contractors; training employees, fire departments and other public emergency response personnel how to handle hazardous materials incident responsibilities; conducting emergency response exercises; and conducting hazardous materials audits.

### ***Response***

Response efforts are taken to prevent or minimize any detrimental effects to health, safety and the environment. Response efforts include safe initial assessment of an incident; a structured system for reporting the response to government agencies, the shipper(s) and company personnel; and an established network of qualified emergency response contractors across the NS system which are mobilized as indicated by the location and nature of incidents. Ten full-time NS Environmental Operations Engineers, including one in Bellevue, Ohio (approximately 30 miles north of Bucyrus), are located strategically throughout the NS system to respond to incidents, supervise the response and remediation efforts of contractors, and coordinate with regulatory agencies.

### ***Remediation***

Remediation efforts bring the incident to a close and restore the environment in the area. Remediation tasks include assessment of the site, contamination and risks; development of a corrective action plan; corrective action; and confirmation assessment. Remediation of serious incidents is typically performed in cooperation with and under the supervision of regulatory authorities.

### **3.4.3 Electric Transmission Facilities**

The proposed alignment would cross one 12-kV electric power line owned by American Electric Power. The corridor would be crossed between East Warren Street and Rensselaer Street. No alterations to the height or location of the electric power line are anticipated by NS.

## **3.5 WATER RESOURCES**

### **3.5.1 Wetlands**

The National Wetland Inventory (NWI) map of Bucyrus, Ohio was used to identify potential wetlands in the project area. According to the NWI map, there are no wetlands in the project area. The soils crossed by the construction are not classified as hydric soils, although the Bennington-Urban land complex could have hydric components where depressions and flats occur (SCS, Crawford County, 1979). No indications of wetlands were noted during the site visit.

### **3.5.2 Surface Waters**

Surface water in Crawford County generally drains from east to west. No surface water resources are present within 500 feet of the construction site. The closest surface water resource in the project vicinity is the Sandusky River, which is approximately 1,500 feet north of the proposed construction site.

### **3.5.3 Floodplain**

Federal Emergency Management Agency (FEMA) maps for the area show that the proposed project is located within a Zone C area. This designation indicates an area of minimal flooding, outside of the 500-year floodplain.

### **3.5.4 Groundwater**

Surficial aquifers in northwestern Ohio consist of unconsolidated glacial materials in the form of Quaternary sand and gravel deposits (USGS, Groundwater Atlas of the U.S., #10, 1995). These surficial aquifer systems are approximately 100 feet thick and supply more than 50 percent of the fresh groundwater withdrawn in northwestern Ohio. In the vicinity of the construction site, groundwater flows through the surficial aquifer systems from southern upland recharge areas toward northern discharge areas near the Sandusky River. Wells drilled to depths of 30 to 60 feet immediately east of Bucyrus yield about 25 to 50 gallons per minute for farm or drinking water supplies (SCS, Crawford County, Ohio, 1979).

## **3.6 BIOLOGICAL RESOURCES**

### **3.6.1 Vegetation**

The major crops grown in Crawford County include corn, soybeans, wheat, oats, and hay. Roadside vegetation, fence-rows, and windbreaks consist of weeds, grasses, deciduous trees, and shrubs. Species of vegetation identified at the site include box elder (*Acer negundo*), silver maple (*Acer saccharinum*), sugar maple (*Acer saccharum*), pin oak (*Quercus palustris*), eastern cottonwood (*Populus deltoides*), rose (*Rosa setigera*), pokeweed (*Phytolacca americana*), frost grape (*Vitis vulpina*), chicory (*Cichorium intybus*), common St. Johnswort (*Hypericum perforatum*), teasel (*Dipsacus sylvestris*), Queen Anne's Lace (*Daucus carota*), reedtop (*Agrostis alba*), Timothy (*Phleum pratense*), Kentucky bluegrass (*Poa pratensis*) and velvet grass (*Holcus lanatus*).

### **3.6.2 Wildlife**

Wildlife habitat found on and adjacent to the construction site is limited to narrow strips of deciduous trees and shrubs adjacent to the existing rail rights-of-way. This area provides suitable habitat for a variety of insects, small birds, and small mammals. Wildlife species that were identified during a site visit included the northern cardinal (*Cardinalis cardinalis*), blue jay (*Cyanocitta cristata*), American robin (*Turdus migratorius*), European starling (*Sturnus vulgaris*), field sparrow (*Spizella pusilla*), song sparrow (*Melospiza melodia*), mourning dove (*Zenaida macroura*), rock dove (*Columba livia*), fox squirrel (*Sciurus niger*), eastern cottontail (*Sylvilagus floridanus*), common sulfur butterfly (*Colias philodice*), and the golden northern bumble bee (*Bombus fervidus*). Additional wildlife species that are expected to be found in this urban setting include the house mouse (*Mus musculus*) and the deer mouse (*Peromyscus maniculatus*).

### **3.6.3 Threatened and Endangered Species**

The U.S. Fish and Wildlife Services (USFWS) and the Ohio Department of Natural Resources (DNR) were contacted regarding threatened and endangered species in the area of the proposed rail line construction at Bucyrus. The USFWS responded that the project is within the range of the Indiana bat (*Myotis sodalis*), a Federally-listed endangered species, but no Indiana bats or their potential habitats were observed during a site visit. The Ohio DNR stated that it did not anticipate any significant, adverse environmental impacts to result from the construction and operation of the proposed construction project.

### **3.6.4 Parks, Forest Preserves, Refuges and Sanctuaries**

There are no parks, forest preserves, refuges or sanctuaries located within the project vicinity.

## **3.7 AIR QUALITY**

According to 40 CFR 81, Crawford County, Ohio is in attainment with the National Ambient Air Quality Standards (NAAQS). Current sources of emissions in the project area include locomotives and other motorized vehicles.

In 1996, NS carried fewer than 800 loads, systemwide, of commodities listed by the Clean Air Act as ozone-depleting. This represents less than 0.017 percent of total traffic, a negligible amount.

### **3.8 NOISE**

Rail, automobile, and truck traffic are the primary sources of noise in the area of the proposed rail line construction. The Ldn 65 dBA contour for the existing NS line extends 150 feet (550 feet at grade crossings) perpendicular to the centerline. The Ldn 65 dBA contour for the existing Conrail line extends 150 feet (250 feet at grade crossings) perpendicular to the centerline. Close to the intersection of the NS and Conrail rail lines, the Ldn 65 dBA contour extends out farther due to the cumulative effects of train operations on both rail lines. Ninety-seven residences are within the existing Ldn 65 dBA contours that extend perpendicular to the centerlines of the existing NS and Conrail rail lines. No schools, churches, hospitals, nursing homes or libraries are within the Ldn 65 dBA contour.

### **3.9 CULTURAL RESOURCES**

Records at the Ohio SHPO were reviewed to determine if previously identified cultural resources are located in the project construction area. The former T&OC passenger station is listed on the NRHP. This structure is located on land owned by Conrail and is currently occupied by a local heating and plumbing business. The former T&OC freight depot, located 200 feet to the south of the T&OC passenger station, was built during the same period and shares many architectural features with the former T&OC passenger station. The former T&OC freight depot, which includes two recent additions on the north and south sides of the building, is owned and operated as a warehouse by Quinn Brothers Construction Company and appears to be eligible for inclusion on the NRHP.

### **3.10 ENERGY**

Potential impacts to energy consumption as a result of the proposed connection would primarily be related to (1) additional fuel consumption by construction equipment during the construction period; (2) changes in fuel consumption by trains using the proposed connection; (3) the effect of the proposed connection on the transportation of energy resources and recyclable commodities; (4) whether the proposed connection would result in an increase or decrease in overall energy efficiency; and (5) the extent to which the proposed connection would cause diversions from rail-to-motor carrier.

## **CHAPTER 4**

### **Potential Environmental Impacts**

This chapter provides an overview of the potential environmental impacts from the proposed rail line connection between NS and Conrail in Bucyrus, Ohio. This connection would involve the construction of a new rail line segment in new right-of-way to connect existing tracks to other existing rail lines, sidings, and/or yard facilities. As with any construction of new railroad tracks, the steps required to build a new connection include site preparation and grading, railbed preparation, ballast application, track installation, and systems (e.g., signals, communications) installation. Although the construction zone required will vary depending on site conditions, most work would be completed within 250 feet of the new rail line.

In conducting its analysis, SEA considered the following environmental impact areas in accordance with the Board's environmental rules at 49 CFR Part 1105.7(e) and other applicable regulations:

- Land Use
- Socioeconomics and Environmental Justice
- Transportation Systems
- Safety
- Water Resources
- Biological Resources
- Air Quality
- Noise
- Cultural Resources
- Energy
- Cumulative Impacts

For detailed information on methodologies and evaluation criteria in determining impacts, refer to Appendix D.

## **4.1 POTENTIAL ENVIRONMENTAL IMPACTS FROM THE PROPOSED ACTION**

### **4.1.1 Land Use**

#### **4.1.1.1 Evaluation Criteria**

The following criteria were used to assess the significance of land use impacts:

##### Land Use Consistency and Compatibility

- The severity of visual, air quality and noise impacts on sensitive land uses.
- Interference with the normal functioning of adjacent land uses.
- Alteration of flood water flow that could increase flooding in adjacent areas.
- Consistency and/or compatibility with local land use plans and policies.

##### Prime Agricultural Land

- Permanent loss of Natural Resources Conservation Service-designated prime farmland.

#### **4.1.1.2 Potential Impacts**

##### **Current Land Use and Zoning**

The proposed project would result in minimal impacts to land use. The properties for which NS is negotiating rights to allow the proposed construction and operation are disturbed areas. The proposed track would have an approximately 40-foot wide right-of-way, between the existing NS right-of-way and the existing Conrail right-of-way. The proposed track would be centered in this right-of-way. While on the Conrail right-of-way, the proposed track would be parallel to and spaced at a perpendicular distance of 15 feet from the centerline of the existing Conrail track for 1,000 feet and then would curve toward and meet the existing Conrail rail line. Approximately 4.6 acres of land would be obtained for the connection, of which 1.5 acres would be occupied by track. The area that would be converted to rail use is disturbed urban land that contains grasses and woody vegetation.

##### **Consistency with Local Plans**

Neither the City of Bucyrus nor Crawford County have zoning ordinances, therefore, this project is consistent with local plans (Appendix C, Exhibits C-20 and C-22).

##### **Prime Farmlands and Coastal Zones**

There would be no loss of prime farmland within the proposed new right-of-way. Temporary construction impacts to adjacent land from excavation, such as mixing of soil profiles or soil compaction, are expected to be minor due to the small amount of land affected and because construction would be limited to the proposed new right-of-way. The proposed construction would not conflict with adjacent land uses.

No construction activities would occur within a designated coastal zone.

### **4.1.2 Socioeconomics and Environmental Justice**

#### **4.1.2.1 Evaluation Criteria**

The following criteria was used to determine impacts from the proposed project to socioeconomics and environmental justice:

- Reviewed demographic and income data from the 1990 Census to compare the population of the area of the proposed construction with that of the City of Bucyrus.
- An environmental justice effect is determined to be significant if an adverse effect of the proposed construction falls disproportionately on low-income or minority populations.

#### **4.1.2.2 Potential Impacts**

Impacts to the local population would be minimal since no residences will be removed. The noise impact would be minimal. Minor increases in revenues to local commercial businesses may occur during the short construction period. City services would not be affected and no school bus routes would cross the proposed connection. There would be no significant adverse environmental effects as a result of the construction and operation of the proposed connection, making concerns about potentially high adverse environmental impacts to the surrounding population unwarranted. Also, the neighborhood around the construction site does not contain disproportionate numbers of minority or low-income residents. In fact, the population in the area of the proposed construction has a lower percentage of minorities than the City of Bucyrus as a whole. Further, the population has a higher median household income than the city as a whole.

U.S. Census data indicate that the proposed connection site contains a lower percentage of minority residents than the City of Bucyrus on average. These data indicate that construction and operation of the proposed connection could not have a high and disparate impact on minority groups. This conclusion is further supported by the absence of significant environmental impacts related to the proposed connection.

Data on economic levels in the area indicate that the population of the relevant census block is more prosperous than that of the city as a whole; census data indicate that the percentage of people living below the federal poverty level in the census block is lower than the city average and median household incomes in the same area are higher than the city average. These data indicate that construction and operation of the proposed connection could not have a high and disparate impact on low income groups. This conclusion is further supported by the absence of significant environmental impacts related to the proposed connection.

### **4.1.3 Transportation Systems**

#### **4.1.3.1 Evaluation Criteria**

The evaluation criteria used to determine potential impacts on transportation includes:

- The need for new grade crossings
- Modifications of existing grade crossings

#### **4.1.3.2 Potential Impacts**

##### **Grade Crossings**

In order to analyze the effects of the proposed construction to at-grade highway crossings for both vehicle delay and safety, the study team identified those crossings exceeding the Board's analysis thresholds for air quality. The study team then calculated potential changes in vehicle delay at these crossings where ADT volumes are 5,000 vpd or greater. The grade crossings at the proposed connection that meet the air quality thresholds have ADT volumes below 5,000 vpd. The study team concluded that for highways with ADT volumes below 5,000 vpd, the potential effect of increased train traffic would be experienced by very few drivers and the additional vehicular delay would be minimal. In addition, the study team concluded that the potential effect of increased train traffic would be experienced by very few drivers. Some temporary vehicular delays could result from the construction and operation of the proposed connection; however, the proposed construction would have no significant effect on grade crossing safety.

The East Warren Street crossing (NS) is currently a single track crossing protected by flashing lights. The proposed new connection will make the East Warren Street crossing (NS) an expanded double track crossing. A new single track crossing will be required at Rensselaer Street located approximately 230 feet east of the existing flashing light-protected Rensselaer Street (NS) crossing. NS proposes to upgrade the existing flashing lights at East Warren Street and Rensselaer Street to include both flashing lights and gates. NS also proposes to install flashing lights and gates at the new Rensselaer Street (NS) crossing.

#### **4.1.4 Safety**

##### **4.1.4.1 Evaluation Criteria**

The following criteria was used to determine the effects of the proposed project on safety issues:

- The likelihood of encountering hazardous waste sites during construction
- The effect of the proposed connection on the transportation of hazardous materials
- The likelihood of a hazardous material release during construction
- Train-highway vehicle and train-train accident probability
- Presence of any electric transmission facilities

##### **4.1.4.2 Potential Impacts**

###### **Hazardous Waste Sites**

As discussed in Section 3.4.1, a review of the EDR database report indicated that there were two Ohio Spills sites and one LUST site within 0.25 mile of the proposed construction corridor. No other hazardous waste sites or known environmental conditions, e.g., NPL, CERCLIS, RCRIS-TSD, ERNS, SPL (SHWS), LUST or SWF/LF, were identified in the vicinity of the proposed connection construction. The database search revealed ten unmappable sites within the city limits of Bucyrus. These sites could not be located because of poor address or geocoding information provided to the state and/or Federal databases.

The Quinn Brothers Construction Company yard on the proposed construction site was not listed in any of the searched databases. However, the potential for environmental contamination at the site cannot be eliminated. If contamination is encountered during construction, proper response and remediation will be implemented.

During a site visit, no observations of any evidence of potential hazardous waste sites in the project area were noted. Five above-ground storage tanks were observed in a BP fuel storage and distribution facility bordering the east side of the construction site. However, these tanks would be unaffected by the proposed construction. No known hazardous waste sites would be impacted by the proposed project.

### **Transportation of Hazardous Materials**

Because the traffic over the connection is through traffic, it is difficult to determine the exact type and amount of hazardous materials that would be transported over the connection. Systemwide, approximately 5.6 percent of NS traffic is composed of hazardous materials. With the low probability of a train accident (one in four million), no significant impact is expected.

No significant adverse impact from transportation of hazardous materials is expected. The reduction in train-miles from using the shorter route over the connection would have a beneficial system impact on transportation safety.

### **Hazardous Materials Release**

All necessary precautions will be taken to reduce the risk of a hazardous materials release during construction. The majority of the materials are likely to be on the construction site include petroleum products for construction vehicles. As part of the National Pollution Discharge Elimination System (NPDES), a plan for accidental releases of hazardous materials must be included in the Storm Water Pollution Prevention Plan (SWPPP).

### **Electric Transmission Facilities**

The proposed alignment would cross one 12-kV electric power line owned by American Electric Power. The corridor would be crossed between East Warren Street and Rensselaer Street. No alterations to the height or location of the electric power line are anticipated by NS.

### **Train Operations**

The potential for train-highway vehicle accidents on the proposed connection is expected to be minimal because of the low speed of the trains (approximately 25 miles per hour), the low level of rail traffic (eight trains per day) and the minimal number of grade crossings (one expanded crossing and one new crossing). The average train would be 5,000 feet long.

Train operation always involves a possibility for train accidents or incidents. However, NS' track and equipment inspection and maintenance programs, employee training programs, and the low speed of trains would minimize this potential. The probability of a train accident on the proposed connection is approximately 1.93 accidents per million train miles.

## **4.1.5 Water Resources**

### **4.1.5.1 Evaluation Criteria**

The following criteria were used to assess the potential impacts to surface water resources and wetlands that could result from the proposed construction project:

- Alteration of creek embankments with rip-rap, concrete, and other bank stabilization measures.
- Temporary or permanent loss of surface water area associated with the incidental deposition of fill.
- Downstream sediment deposition or water turbidity due to fill activities, dredging, and/or soil erosion from upland construction site areas.
- Direct or indirect destruction and/or degradation of aquatic, wetland, and riparian vegetation/habitat.
- Degradation of water quality through sediment loading or chemical/petroleum spills.
- Alteration of water flow that could increase bank erosion or flooding, uproot or destroy vegetation, or affect fish and wildlife habitats.

The extent and duration of impacts to surface water resources and wetlands resulting from the project would depend primarily on the type of work to be completed and the size of the project. The overall effect could be lessened by avoiding important resources and minimizing impacts to the extent practicable, and by implementing mitigation measures. Prior to initiating construction, regulatory agencies would be consulted regarding the need to obtain permits, such as U.S. Army Corps of Engineers' (COE) Section 404 permits, NPDES permits, and state-required permits or agreements, as appropriate.

### **4.1.5.2 Potential Impacts**

#### **Wetlands**

The NWI map of Bucyrus, Ohio was used to identify potential wetlands in the project area. According to the NWI map, there are no wetlands in the project area. The soils crossed by the construction are not classified as hydric soils, although the Bennington-Urban land complex could potentially have hydric components where depressions and flats occur (SCS, Crawford County, 1979). No indications of wetlands were noted during the site visit. Therefore, there will be no impacts as a result of the construction.

#### **Surface Water**

No surface waters or wetlands would be crossed by the proposed connection. Storm water drainage patterns are not anticipated to be altered by the proposed project. Potential impacts from soil erosion resulting from cleared vegetation and disturbed soil would be insignificant because Best Management Practices (BMPs) would be used to control runoff and soil erosion. In addition, NS would restore disturbed areas through reseeded.

**Floodplain**

FEMA maps for the area show that the proposed project is not within the 100-year floodplain.

**Groundwater**

Groundwater quality could only be affected if a sufficient amount of a contaminant from a potential spill were released and if it were able to leach to the aquifer prior to implementation and completion of clean-up procedures. The circumstances under which this could happen would be unusual considering the permeability of the soils (moderately slow to slow), the depth to groundwater (30 to 60 feet), low rail traffic (eight trains per day), low rail speed (25 mph), and NS' transportation safety performance record and emergency action procedures. The probability of a train accident on the proposed connection is approximately 1.93 accidents per million train miles, or one accident every 300 years (The FRA defines a train accident as any event resulting in damages as low as \$6,300). Response to a contaminant release is expected to be timely and sufficient to clean up the release. Any spill or contaminant release would be reported and cleaned up in accordance with all Federal and state statutes and regulations. The construction of the proposed rail line would not have adverse impacts on groundwater resources. Only a small amount of fuel and oil would be present on the site during construction activities. Therefore, any potential leaks or spills could only involve small amounts and would be cleaned up immediately.

**4.1.6 Biological Resources****4.1.6.1 Evaluation Criteria**

The following significance criteria were utilized to assess the potential impacts to biological resources resulting from the proposed projects:

- Loss or degradation of unique or important vegetative communities.
- Harm to or loss of individuals or populations of rare, threatened or endangered plants or animals.
- Disturbance of nesting, breeding or foraging areas of threatened or endangered wildlife.
- Loss or degradation of areas designated as critical habitat.
- Loss or degradation of wildlife sanctuaries, refuges or national, state or local parks/forests.
- Alteration of movement or migration corridors for animals.
- Loss of large numbers of local wildlife or their habitats.

Sensitive animal species with potential to occur in the vicinity of the project may be impacted by construction activities. A determination as to the level of impact will depend on many factors including the availability of suitable habitat, previous surveys, and comments from agencies.

Parks, forest preserves, refuges and sanctuaries were identified within one mile of the proposed construction. Potential impacts to these areas were determined based on their distance from the proposed constructions and the degree to which rail construction, operation and maintenance would disturb or disrupt activities at these areas.

#### **4.1.6.2 Potential Impacts**

##### **Vegetation**

Vegetation that would be lost due to construction of the proposed project would include primarily common grasses, weeds, small deciduous trees, and shrubs. This vegetation, which is typical of disturbed areas, occupies approximately 50 percent of the proposed project area. The remaining 50 percent of the project area is railroad right-of-way, or vacant lots devoid of vegetation. None of the area is used for cropland. The proposed action would impact a narrow strip of woody vegetation bordering the existing Conrail right-of-way on the south and woody shrubs and grassy vegetation in vacant commercial lots. Following construction, NS would reseed any disturbed areas outside the subgrade slope.

##### **Wildlife**

No adverse impacts to wildlife populations are anticipated because the construction site is small, in an urban area, and contains only limited wildlife habitat. The proposed project would require approximately 4.6 acres of additional urban land. Wildlife habitat impacted by the proposed project would be limited to recently disturbed urban land. The limited wildlife within the project area would be subject to sporadic disturbance because of noise and human activity generated during construction activities, subsequent train operations, and maintenance activities.

Construction of the proposed connection could temporarily displace local terrestrial wildlife because of increased noise from construction equipment. However, such disturbances would be temporary and are not anticipated to cause a major, permanent, redistribution of resident species. The width of the right-of-way and low height of rail should not pose a significant barrier to the movement of wildlife. Limited mortality of small animals may result during construction due to compaction of burrows and encounters with heavy equipment. Incidental train/animal collisions could result in mortality to some species. Any mortality would be expected to be insignificant compared to the overall populations of common urban wildlife species in the project area.

##### **Threatened and Endangered Species**

The USFWS and the Ohio DNR were contacted regarding threatened and endangered species in the area of the proposed connection at Bucyrus. The USFWS responded that the project is within the range of the Indiana bat (*Myotis sodalis*), a Federally-listed endangered species. The USFWS recommends that trees with cavities or exfoliating bark be saved wherever possible and cut only between September 15 and April 15. The area is heavily-disturbed and influenced by railroad and urban development. No Indiana bats or their potential habitats were observed during a site visit. Due to this lack of habitat, no impact to this species is anticipated. In addition, the Ohio DNR stated that it did not anticipate any significant, adverse environmental impacts to result from the construction and operation of the proposed connection, and no threatened or endangered species or their potential habitats were observed during a site visit. Therefore, no significant adverse impacts to threatened or endangered species are expected as a result of the proposed connection.

##### **Parks, Forest Preserves, Refuges, and Sanctuaries**

No potential impacts on parks, forest preserves, refuges or sanctuaries are expected since none exist in the area.

#### **4.1.7 Air Quality**

**4.1.7.1 Evaluation Criteria**

The following criteria were used to assess the potential impacts to air quality that could result from the proposed construction project:

- Increase in levels of pollutant emissions (e.g., hydrocarbons, carbon monoxide, sulfur dioxide, nitrogen oxide, and particulate matter) from the operation of construction equipment and vehicles.
- Effects related to train operations over the NS and Conrail line segments adjoining the connection, to the extent they meet the Board’s thresholds for analysis.
- Evaluation of the potential for air quality effects from fugitive dust emissions.
- Air quality effects are considered to be adverse if the proposed construction would lead to long-term increases in pollutant emissions or excessive fugitive dust emissions.

**4.1.7.2 Potential Impacts**

Crawford County, Ohio is an air quality attainment area. Only minor effects on air quality are expected as a result of the construction, operation and maintenance of the proposed project. The operation of heavy equipment would be the primary source of pollutant emissions during construction activities. Such pollutants vary by the source and include:

- Particulate matter, volatile organic compounds (VOCs), carbon monoxide (CO), and nitrogen oxide (NO) resulting from the combustion of diesel fuel.
- Fugitive dust along the right-of-way and unimproved roads resulting from the operation of heavy equipment.

During the construction phase, grading, excavation and placement of ballast and subgrade could result in a temporary increase of fugitive dust. However, with appropriate mitigation measures, such effects are expected to be minimal. Mitigation measures would include spraying road surfaces with a water truck or covering truck beds with tarps as necessary. Emissions from construction and maintenance equipment engines would be localized and temporary during the construction period and during maintenance activities. They are not expected to reduce air quality.

Because rail traffic over the proposed connection would meet the Board’s thresholds for air quality, area emissions were quantified and are presented below in Table 4-1. These emissions are not significant. Emissions resulting from vehicle delays at grade crossings were not quantified since the ADT at the crossings does not exceed 5,000 vpd.

**Table 4-1  
Estimated Air Emissions for the Proposed Connection in Bucyrus  
(tons per year)**

VOC	CO	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>	Pb
0.12	0.35	3.2	0.21	0.08	0.0000067

As previously stated, the proposed connection would shorten the route NS trains would have to travel by approximately 70 miles. The estimated systemwide decreases in emissions as a result of the proposed connection in Bucyrus are presented below in Table 4-2.

**Table 4-2**  
**Estimated Systemwide Decreases in Emissions as a Result of the**  
**Proposed Connection in Bucyrus**  
**(tons per year)**

VOC	CO	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>	Pb
16.5	49.4	444.7	28.8	11.2	0.00094

**Vehicle Emissions**

Emissions from heavy equipment and construction vehicles would occur during construction. The majority of these emissions would be limited to the period of construction. Minor additional impacts would include maintenance activities for the rail line that would occur sporadically for short periods throughout the year. Vehicle emissions can be minimized by proper vehicle maintenance.

**Fugitive Dust Emissions**

Increases in fugitive dust could occur due to grading and other earthwork necessary for rail bed preparation or removal activities. These impacts would only be temporary and would be minimized by good construction practices that would include dust control.

**4.1.8 Noise**

**4.1.8.1 Evaluation Criteria**

The following criteria was used to determine potential noise impacts from the proposed project:

- Identification of noise-sensitive land uses where changes in operation could result in noise exposure increases.
- Identification of noise sensitive receptors (e.g. residences, schools, hospitals, libraries).

**4.1.8.2 Potential Impacts**

**Construction**

Noise levels in the project area are expected to increase temporarily during construction. Temporary noise increases would be caused by operation of vehicles and heavy machinery used for grading, rail construction and similar activities. The impacts would only be of short-term duration, occurring from approximately 7 a.m. to 5 p.m. and only during the expected three to six-month construction period. Since construction noise would occur during daylight hours and would be short-term, noise impacts from construction are not expected to be significant.

## **Operation**

Approximately eight trains per day are expected to travel over the proposed connection. The eight trains per day meets the Board's thresholds for noise analysis. NS would regularly lubricate the 10 degree curve of the proposed connection to minimize the friction which causes both rail wear and wheel squeal. At a maximum operating speed of 25 miles per hour over the connection, increases in noise levels at any given location should not occur for more than approximately four minutes while a train passes. Train traffic operating on the proposed connection would generate an Ldn 65 dBA contour of only approximately 50 feet perpendicular to the proposed rail line (approximately 250 feet at grade crossings).

As stated previously, 97 residential noise receptors are within the existing Ldn 65 dBA contour. Of these, 48 residences would experience an increase of only 2 dBA when train operations over the proposed connection begin. The increase in dBA that the other 49 residences would experience would be less than 2 dBA. Further, 13 additional residential noise receptors would be within the Ldn 65 dBA contour of the proposed connection; all 13 would experience an increase of only 2 dBA after construction. The 61 residences that would experience an increase of 2 dBA are along the existing Conrail rail line. No schools, libraries, hospitals, retirement homes or churches are within 500 feet of the proposed project. Therefore, train operation over the proposed connection is not expected to cause a significant increase in ambient noise levels.

### **4.1.9 Cultural Resources**

#### **4.1.9.1 Evaluation Criteria**

Impacts to historic and archaeological resources would be considered adverse (as defined in 36 CFR 800.9) if any site listed or eligible for listing on the NRHP would experience destruction of the site; alteration of site characteristics or setting; neglect resulting in deterioration or destruction; or transfer, lease, or sale of the property on which the site occurs if adequate restrictions or conditions are not included to ensure preservation of the property's significant historic features.

#### **4.1.9.2 Potential Impacts**

The former T&OC freight depot would be demolished to make way for the proposed connection. The T&OC freight depot is located 200 feet to the south of the former T&OC passenger station. Both structures were built during the same period and share many architectural features. The T&OC freight depot appears to be eligible for the NRHP both individually and as part of an historic district with the former passenger station. The former T&OC passenger station is already listed on the NRHP. If the SHPO determines that the two buildings are eligible for listing as an historic district, the demolition of the T&OC freight depot would affect that district. However, mitigation measures, recommended at HABS Level II, would reduce that overall impact.

No other documented archaeological sites or historic properties are on or near the proposed construction site. However, the potential for undocumented archaeological sites or historic properties has not been dismissed. Consultation with the Ohio SHPO was initiated by the Board during a meeting on July 25, 1997 where findings of eligibility were discussed. Support documentation has been prepared and will be submitted to the Ohio SHPO.

#### **4.1.10 Energy Resources**

##### **4.1.10.1 Evaluation Criteria**

The following criteria was used to evaluate the potential impacts of the proposed project on energy resources:

- The effect of the proposed project on energy consumption.
- The effect of the proposed project on the transportation of energy resources and recyclable commodities.
- The effect of the proposed project on diversions of shipments from rail to trucks.

##### **4.1.10.2 Potential Impacts**

The operation of construction equipment would require only a small amount of diesel fuel, due to the short duration of the project. The amount of energy resources and recyclable commodities that would be transported over the proposed connection cannot be quantified, but the operational efficiencies expected to be realized from the operation of the proposed connection would be expected to benefit the transportation of energy resources and recyclable commodities. No additional rail-to-truck diversions would result from the proposed connection. The proposed connection is expected to result in an increase in overall energy efficiency since it will provide more direct routes to NS endpoints. The expected fuel savings is 1.6 million gallons per year.

#### **4.1.11 Cumulative Impacts**

Cumulative impacts are those impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR Parts 1500-1508, Section 1508.7). As shown above, potential environmental impacts related to the construction and operation of the proposed connection are insignificant or nonexistent. The proposed project is not expected to have any significant adverse impact on land use, water resources, biological resources, air quality, noise, transportation, safety, electrical transmission facilities, or minority and low-income groups. Any noise increases during construction would be limited to normal work hours and would only occur during the construction period. Increases in noise from ongoing operation on the connection would be minor. Proposed new grade crossings would be protected by flashing lights and gates to mitigate potential safety concerns. There would not be any significant environmental impacts on any group regardless of race or economic status as a result of the proposed project. Moreover, the community potentially affected is more prosperous than the city as a whole and has a lower percentage of minority residents than the city average. Consequently, there would not be any high and disproportionate environmental justice impacts as a result of the construction and operation of the proposed connection. This conclusion is further supported by the absence of significant environmental impacts related to the proposed connection. One potentially historic site, the T&OC freight depot, will be impacted by the proposed connection. The operation of the proposed connection would result in reduced fuel consumption of approximately 1.6 million gallons per year and associated reductions in air emissions.

Based on a review of the transaction Application and the proposed Operating Plan supplied by NS, no other rail construction projects are underway or planned in the vicinity of the proposed connection. Therefore, the effects outlined above represent the cumulative effects of the proposed construction project. The cumulative effects of the entire acquisition transaction, which could result from increased rail line segment, rail yard, and intermodal facility activity, abandonments, and other construction projects, will be addressed in the Environmental Impact Statement (EIS).

## **4.2 POTENTIAL ENVIRONMENTAL IMPACTS OF ALTERNATIVE ACTIONS**

### **4.2.1 No-Action Alternative**

If the “no-action” alternative were implemented, the proposed rail line connection would not be constructed or operated. Therefore, the current land use and other existing environmental conditions would remain unchanged. However, if the related transaction is approved, the absence of this rail line connection would result in less efficient rail service. The capacity constraints, delays, and slower operating speeds that would result without the new connection would cause additional fuel consumption and increase pollutant emissions from locomotives.

#### **4.2.2 Build Alternatives**

As discussed in Section 2.2, SEA identified no feasible alternatives to new construction at the Bucyrus site.

Alternative A would require expansion of an existing grade crossing at East Warren Street and a new grade crossing at Rensselaer Street. A T&OC freight depot, potentially historic, and the Quinn Brothers Construction Company one-story office building would both be demolished. The construction company's storage yard, where the office building is located, would also be cleared.

Alternative B would require new grade crossings at East Warren Street and Rensselaer Street. The T&OC freight depot would not be demolished; however, a recent addition to the freight depot would be removed. The Quinn Brothers Construction Company office building would be demolished as would the construction company's storage yard. It would also require the removal of two residences in the right-of-way.

Table 2-1 summarizes impacts associated with both build alternatives.

## CHAPTER 5

### Agency Comments and Mitigation

This chapter summarizes comments and suggested mitigation measures received from Federal, State and local agencies or officials about the proposed construction, and outlines SEA's recommended mitigation measures.

#### 5.1 SUMMARY OF AGENCY COMMENTS

NS sent letters to various Federal, state and local agencies seeking their comments on the construction and operation of the proposed connecting track (See Appendix C, Exhibit 1 for the consultation letter, and Exhibit 2 for the list of agencies that were contacted). The letters were distributed to these agencies in May and June, 1997. The agency responses to the consultation letter are provided in Appendix C, Exhibits 3 through 21. This chapter summarizes comments received from these agencies including mitigation proposed by the Petitioner, NS, where relevant.

##### 5.1.1 Land Use

**Comment:** The Department of Agriculture, Natural Resources Conservation Service (Appendix C, Exhibit 5) stated that there are no local land use concerns from the proposed Bucyrus, Ohio site.

**Comment:** Mayor Wilson of Bucyrus, Ohio, (Appendix C, Exhibit 20) stated his concerns with the local land use.

**Petitioner's Response:** The Department of Agriculture, Natural Resource Conservation Service, stated that there are no local land use concerns from the proposed Bucyrus, Ohio site. The proposed project would result in minimal impacts to adjacent land with 4.6 acres of land (1.5 acres occupied by track) needed for the construction.

**Comment:** The National Geodetic Survey (Appendix C, Exhibit 6) stated that it has verified that none of its geodetic station markers are endangered by the proposed construction.

**Comment:** The Ohio State Clearinghouse, Office of Budget and Management (Appendix C, Exhibit 18), stated that the State Clearinghouse will not be conducting a review. The review will be conducted on the local level. The Clearinghouse faxed the Burns & McDonnell letter to the President of the Crawford County Board of the County Commissioners.

##### 5.1.2 Socioeconomics and Environmental Justice

No comments were received concerning socioeconomics and environmental justice.

### 5.1.3 Transportation

**Comment:** The Federal Railroad Administration (Appendix C, Exhibit 11) stated that the new grade crossings, with the attendant increase in safety risk and congestion, will have a negative impact on the citizens of Bucyrus. It recommended that NS work with the City of Bucyrus, the State of Ohio and other appropriate officials to reach a solution that does not put the safety of the citizens at increased risk. At a minimum, they suggested that the railroad and the community find another grade crossing to close, so that there is no negative impact on community safety.

**Comment:** The Federal Highway Administration (Appendix C, Exhibit 10) concurs with the Federal Railroad Administration's response.

**Petitioner's Response:** The expanded and new grade crossings have ADT volumes below 5,000 vpd. The study team concluded that for highways with ADT volumes below 5,000 vpd, the potential effect of increased train traffic would be experienced by very few drivers; therefore, this construction project would have no significant effect on grade crossing safety. NS proposes to install flashing lights and gates at the grade crossings in response to safety concerns.

**Comment:** Mayor Wilson of Bucyrus, Ohio (Appendix C, Exhibit 20) stated his concerns with the local land use and ambient noise which will increase from the additional train traffic. He was also concerned with the disruption this may cause to traffic on six of the east/west streets.

**Petitioner's Response:** The proposed project would result in minimal impacts to adjacent land with 4.6 acres of land (1.5 acres occupied by track) needed for the construction. Increases in noise level will be 2 dBA. The six east/west streets presently experience train delays caused by 26 trains per day operating over the existing NS rail line. An additional eight trains per day would be operated over the proposed connection. These trains would be traveling at 25 miles per hour and are anticipated to cause only temporary delays of approximately four minutes at grade crossings.

### 5.1.4 Safety

No comments were received regarding the transport of hazardous materials.

No comments were received concerning electric facilities. NS does not anticipate any construction-related impacts to American Electric Power's power line.

### 5.1.5 Water Resources

**Comment:** The Ohio Department of Natural Resources (Appendix C, Exhibit 15) stated that they do not anticipate any significant adverse environmental impacts to result from the construction and operation of the proposed Bucyrus connection.

**Comment:** The Ohio Environmental Protection Agency (Appendix C, Exhibit 16) stated that upon review of its records, it did not find any issues for wetlands or sites on the DERR Master Sites List.

**Comment:** The Buffalo District of the U.S. Army Corps of Engineers (Appendix C, Exhibit 3) stated that it had no comments.

#### **5.1.6 Biological Resources**

**Comment:** Mr. Jake Hoogland from the National Park Service (Appendix C, Exhibit 14) stated that there were no national parks in the area of the proposed project.

**Comment:** The USDA National Forest Service (Appendix C, Exhibit 4) stated that no impacts to National Forests are expected from the proposed activity.

**Comment:** The Ohio Department of Natural Resources (Appendix C, Exhibit 15) stated that it does not anticipate any significant adverse environmental impacts to result from the construction and operation of the proposed Bucyrus connection.

**Comment:** The U.S. Department of the Interior, Fish and Wildlife Service, Division of Ecological Services (Appendix C, Exhibit 9), stated that the proposed Bucyrus project lies within the range of the Indiana bat, a Federally-listed endangered species.

**Petitioner's Response:** The area is heavily disturbed and influenced by railroad and urban development. No Indiana bats or their potential habitats were observed during a site visit. In addition, the Ohio DNR stated that they did not anticipate any significant, adverse environmental impacts to result from the construction and operation of the proposed facility.

#### **5.1.7 Air Quality**

**Comment:** Ms. Pat Haman, Director of the U.S. EPA, Office of Federal Activities, (Appendix C, Exhibit 13) stated that they were unable to meet the time frame for reviewing the letter.

#### **5.1.8 Noise**

**Comment:** Mayor Wilson of Bucyrus, Ohio (Appendix C, Exhibit 20) stated his concerns with the ambient noise which will increase from the additional train traffic.

**Comment:** The County Commissioners of Crawford County (Appendix C, Exhibit 21) stated that they do not have any objections to the proposed connection. They mentioned concern about the noise factor of the additional trains that will pass through this area, especially during the evening and night hours.

**Petitioner's Response:** Ninety-seven residences are within the existing Ldn 65 dBA contour. Forty-eight of these would experience only a two dBA increase as a result of train operations on the proposed connection. Thirteen residences are outside the existing Ldn 65 dBA contour but would be within the Ldn 65 dBA contour of the proposed connection. These 13 residences would only experience a 2 dBA increase as a result of train operations on the proposed connection. These slight increases in noise levels are not expected to be significant.

#### **5.1.9 Cultural Resources**

**Comment:** The Bureau of Indian Affairs (Appendix C, Exhibit 8) stated that there are no Federally-

recognized Indian tribes and/or Indian reservation trust interests in Ohio. They also stated they were unaware of any existent Indian religious sites and/or sacred Indian burial grounds in the immediate vicinity of the proposed construction site.

**Comment:** The Ohio Historic Preservation Office (Appendix C, Exhibit 17) stated that they need to know how the proposed project will affect the former T&OC Railroad Depot, located at 700 East Rensselaer Street, before they can comment. The agency will also need front and rear elevation photographs of any building over fifty years old which will be affected by the proposed construction.

**Petitioner's Response:** The proposed connection would impact the former T&OC freight depot, which appears to be eligible for NRHP listing either alone or as a part of a district with the T&OC passenger station. In a meeting on July 25, 1997, STB initiated consultation with the Ohio SHPO where findings of potential eligibility were discussed. Since the former T&OC freight depot would be demolished to make way for the new right-of-way, the project would likely have an adverse effect on a historic property. Support documentation has been prepared and will be submitted to the Ohio SHPO by the STB. The documentation recommends mitigation at HABS Level II. Consultation with the Ohio SHPO will continue.

#### **5.1.10 Energy Resources**

No comments were received concerning energy resources.

## **5.2 AGENCY SUGGESTED MITIGATION**

A list of the agencies consulted during the environmental review process and copies of agency correspondence related to this rail construction are provided in Appendix C.

The following mitigation measures were suggested for the proposed construction project by the various parties consulted in the process of preparing the EA:

- The Rensselaer and East Warren Street road crossings are currently protected by flashing lights at the crossing. The East Warren Street crossing would be expanded to include the double track that would result from the proposed construction. One new at-grade crossing is proposed for Rensselaer Street. Warning signals at the existing Warren Street and Rensselaer Street crossings, would be upgraded and protected by flashing lights and gates. The new grade crossing at Rensselaer Street also would be protected with flashing lights and arm gates.
- As mitigation for the impacts to the former freight depot, which may be determined to be eligible for the National Register, petitioner will consult with the Ohio SHPO to determine the appropriate actions.
- Petitioner will construct the new connections during normal working hours to the extent practicable.
- The petitioner will construct a natural or man-made visual buffer to the west of the residential property at the corner of Catherine and Rensselaer Streets.
- Petitioner would maintain all rail line and warning devices according to Federal Railroad Administration standards.

- Petitioner would comply with all applicable Federal, state and local regulations regarding fugitive dust and open burning.
- Petitioner would observe all applicable regulations for handling and disposing of waste materials, including hazardous waste.
- Petitioner would restore any adjacent properties that are disturbed during construction.
- Petitioner would use BMPs to control erosion, runoff and surface instability during construction. After the new rail line is constructed, NS will reseed outside the subgrade slope to provide permanent cover and prevent potential erosion.
- Petitioner would control temporary noise from construction equipment by ensuring all machinery has properly functioning muffler systems and by work hour controls.
- Petitioner would transport all hazardous materials in compliance with the DOT Hazardous Materials Regulations (49 CFR parts 171, 172, 173, 178, 179, 180, and 185).
- In the case of a spill, Petitioner would follow appropriate emergency response procedures outlined in its emergency response plans.
- Petitioner would restore all roads disturbed during construction to the conditions required by state or local regulations.

### **5.3 SEA RECOMMENDED MITIGATION**

SEA recommends that the Board impose the following mitigation measures in any decision approving the construction waiver for the proposed rail line connection construction in Bucyrus.

### **5.3.1 General Mitigation Measures**

SEA's recommendations include, but are not limited to, the following general mitigation conditions:

#### **Land Use**

1. NS shall restore any adjacent properties that are disturbed during construction activities to their pre-construction conditions.
2. Before undertaking any construction activities, NS shall consult with any potentially affected American Indian Tribes adjacent to, or having a potential interest in the right-of-way.

#### **Socioeconomics and Environmental Justice**

1. There are no impacts to socioeconomics and environmental justice; therefore, there is no proposed mitigation.

#### **Transportation Systems**

1. NS shall use appropriate signs and barricades to control traffic disruptions during construction.
2. NS shall restore roads disturbed during construction to conditions as required by state or local jurisdictions.

#### **Safety**

1. NS shall observe all applicable Federal, state, and local regulations regarding handling and disposal of any waste materials, including hazardous waste, encountered or generated during construction of the proposed rail line connection.
2. NS shall dispose of all materials that cannot be reused in accordance with state and local solid waste management regulations.
3. NS shall consult with the appropriate Federal, state and local agencies if hazardous waste and/or materials are discovered at the site.
4. NS shall transport all hazardous materials in compliance with DOT Hazardous Materials Regulations (49 CFR Parts 171, 172, 173, 178, 179, 180, and 185). NS shall provide, upon request, local emergency management organizations with copies of all applicable Emergency Response Plans and participate in the training of local emergency staff for coordinated responses to incidents. In the case of a hazardous material incident, NS shall follow appropriate emergency response procedures contained in their Emergency Response Plans.

**Water Resources**

1. NS shall obtain all necessary 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. NS shall use appropriate techniques to minimize impacts to water bodies and wetlands.

**Biological Resources**

1. NS shall use BMPs to control erosion, runoff, and surface instability during construction, including seeding, fiber mats, straw mulch, plastic liners, slope drains, and other erosion control devices. Once the track is constructed, NS shall establish vegetation on the embankment slope to provide permanent cover and prevent potential erosion. If erosion develops, NS shall take steps to develop other appropriate erosion control procedures.
2. NS shall use only EPA-approved herbicides and qualified contractors for application of right-of-way maintenance herbicides, and shall limit such application to the extent necessary for rail operations.

**Air Quality**

1. NS shall comply with all applicable Federal, state, and local regulations regarding the control of fugitive dust. Fugitive dust emissions created during construction shall be minimized by using such control methods as water spraying, installation of wind barriers, and chemical treatment.

**Noise**

1. NS shall control temporary noise from construction equipment through the use of work hour controls and maintenance of muffler systems on machinery.

**Cultural Resources**

1. In those cases where historic resources would be adversely affected, NS shall not undertake construction activities until the Section 106 of the National Historic Preservation Act (16 U.S.C. 470f., as amended) review process is completed. If previously undiscovered archaeological remains are found during construction, NS shall cease work and immediately contact the Ohio SHPO to initiate the appropriate Section 106 process.

**Energy**

1. There are no impacts to mitigation; therefore, there are no proposed mitigation measures.

### **5.3.2 Specific Mitigation Measures**

In addition to the general mitigation measures identified above, SEA recommends that the Board impose the following specific mitigation measures in any decision approving the construction waiver for the proposed rail connection construction in Bucyrus:

1. Existing flashing lights at East Warren Street and Rensselaer Street grade crossings will be upgraded to include both flashing lights and gates. Flashing lights and gates at the new Rensselaer Street crossing would also be installed.
2. Mitigation measures, recommended at HABS Level II, will be completed prior to the demolition of the former T&OC freight depot to permanently record its history and appearance.

### **5.4 REQUEST FOR COMMENTS**

SEA specifically invites comments on all aspects of this EA, including the scope and adequacy of the recommended mitigation. SEA will consider all comments received in response to the EA in making its final recommendations to the Board. Comments (an original and 10 copies) should be sent to: Vernon A. Williams, Secretary, Surface Transportation Board, 1925 K Street, NW, Suite 700, Washington, DC 20423. Mark the lower left corner of the envelope: Attention: Dana White, Environmental Comments, Finance Docket No. 33388 (Sub Nos. 1-7). You may also direct questions to Ms. White at this address or by telephoning (888) 869-1997.

Date made available to the public: October 7, 1997

Comment due date: October 27, 1997

**APPENDIX A**

**PETITIONER'S REQUEST FOR  
EXPEDITED CONSIDERATION**

**APPENDIX B**

**STB DECISION 9  
DECISION 9 PRESS RELEASE**

**APPENDIX C**

**AGENCIES AND OTHER PARTIES CONSULTED  
AGENCY CORRESPONDENCE**



## **APPENDIX E**

## **REFERENCES**

## SURFACE TRANSPORTATION BOARD

## DECISION

STB 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

Decision No. 9<sup>2</sup>

Decided: June 11, 1997

On April 10, 1997, CSX Corporation (CSXC), CSX Transportation, Inc. (CSXT), Norfolk Southern Corporation (NSC), Norfolk Southern Railway Company (NSR), Conrail Inc. (CRI), and Consolidated Rail Corporation (CRC)<sup>3</sup> filed their notice of intent to file an application seeking our authorization for: (a) the acquisition by CSX and NS of control of Conrail, and (b) the division of Conrail's assets by and between CSX and NS. In Decision No. 5, served and published in the *Federal Register* on May 13, 1997, at 62 FR 26352, we invited comments from interested persons respecting the CSX-1 and NS-1 petitions filed May 2, 1997, by applicants CSX and NS, wherein applicants seek, for seven construction projects, waivers of our otherwise applicable "everything goes together" rule.<sup>4</sup> The requested waivers, if granted, would allow CSX and NS to begin construction on the seven projects following the completion of our environmental review of the constructions, and our issuance of further decisions exempting or approving construction, but in

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<sup>2</sup> This decision also embraces the following proceedings: STB Finance Docket No. 33388 (Sub-No. 1), *CSX Transportation, Inc., and Consolidated Rail Corporation--Construction--Crestline, OH*; STB Finance Docket No. 33388 (Sub-No. 2), *CSX Transportation, Inc., and Consolidated Rail Corporation--Construction--Willow Creek, IN*; STB Finance Docket No. 33388 (Sub-No. 3), *CSX Transportation, Inc., and Consolidated Rail Corporation--Construction--Greenwich, OH*; STB Finance Docket No. 33388 (Sub-No. 4), *CSX Transportation, Inc., and Consolidated Rail Corporation--Construction--Sidney Junction, OH*; STB Finance Docket No. 33388 (Sub-No. 5), *Norfolk Southern Railway Company and Consolidated Rail Corporation--Construction--Colson/Bucyrus, OH*; STB Finance Docket No. 33388 (Sub-No. 6), *Norfolk Southern Railway Company and Consolidated Rail Corporation--Construction--Alexandria, IN*; and STB Finance Docket No. 33388 (Sub-No. 7), *Norfolk Southern Railway Company--Construction--Sidney, IL*.

<sup>3</sup> CSXC and CSXT are referred to collectively as CSX. NSC and NSR are referred to collectively as NS. CRI and CRC are referred to collectively as Conrail. CSX, NS, and Conrail are referred to collectively as applicants.

<sup>4</sup> Our regulations provide that applicants shall file, concurrently with their 49 U.S.C. 11323-25 primary application, all "directly related applications, e.g., those seeking authority to construct or abandon rail lines, \* \* \* ." 49 CFR 1180.4(c)(2)(vi). Our regulations also provide, however, that, for good cause shown, we can waive a portion, but not all, of the requirements otherwise imposed by our regulations. 49 CFR 1180.4(f)(1).

advance of a final ruling on the primary application.

Seven construction projects, more fully detailed below, are the focus of the two petitions. Applicants contend that it is important that these projects (all of which involve relatively short connections between two rail carriers and which have a total length of fewer than 4 miles) be constructed prior to a decision on the primary application. Applicants claim that these connections must be in place prior to a decision on the primary application so that, if and when we approve the primary application, CSXT (with respect to four of the connections) and NSR (with respect to the other three) will be immediately able to provide efficient service in competition with each other. Applicants contend that, without early authorization to construct these connections, both CSXT and NSR would be severely limited in their ability to serve important (though different) customers. At the same time, applicants recognize that there can be no construction until we complete our environmental review of each of these construction projects and we issue a decision approving the construction, or an exemption from our otherwise applicable construction approval criteria, and impose whatever environmental conditions that we find appropriate.

**The CSX Connections.** If we grant its waiver request, CSXT will file, in four separate dockets,<sup>5</sup> a notice of exemption pursuant to 49 CFR 1150.36 for construction of a connection at Crestline, OH, and petitions for exemption pursuant to 49 U.S.C. 10502 and 49 CFR 1121.1 and 1150.1(a) for the construction of connections at Greenwich and Sidney, OH, and Willow Creek, IN. CSXT indicates that it would consult with appropriate federal, state, and local agencies with respect to any potential environmental effects from the construction of these connections and would file environmental reports with our Section of Environmental Analysis (SEA) at the time that the notice and petitions are filed. The connections at issue are as follows:

- (1) Two main line CRC tracks cross at Crestline, and CSXT proposes to construct in the northwest quadrant a connection track between those two CRC main lines. The connection would extend approximately 1,507 feet<sup>6</sup> between approximately MP 75.4 on CRC's North-South main line between Greenwich, OH, and Indianapolis, IN, and approximately MP 188.8 on CRC's East-West main line between Pittsburgh, PA, and Ft. Wayne, IN.
- (2) CSXT and CRC cross each other at Willow Creek, and CSXT proposes to construct a connection track in the southeast quadrant between the CSXT main line and the CRC main line. The connection would extend approximately 2,800 feet between approximately MP BI-236.5 on the CSXT main line between Garrett, IN, and Chicago, IL, and approximately MP 248.8 on the CRC main line between Porter, IN, and Gibson Yard, IN (outside Chicago).

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<sup>5</sup> These dockets will be sub-dockets 1, 2, 3, and 4 under STB Finance Docket No. 33388.

<sup>6</sup> CSXT's correction, filed May 21, 1997, modified the length of this connection from 1,142 feet at MP 75.5 to 1,507 feet at MP 75.4.

- (3) The lines of CSXT and CRC cross each other at Greenwich, and CSXT proposes to construct connection tracks in the northwest and southeast quadrants between the CSXT main line and the CRC main line. The connection in the northwest quadrant would extend approximately 4,600 feet between approximately MP BG-193.1 on the CSXT main line between Chicago and Pittsburgh, and approximately MP 54.1 on the CRC main line between Cleveland and Cincinnati. A portion of this connection in the northwest quadrant would be constructed utilizing existing trackage and/or right-of-way of the Wheeling & Lake Erie Railway Company. The connection in the southeast quadrant would extend approximately 1,044 feet between approximately MP BG-192.5 on the CSXT main line and approximately MP 54.6 on the CRC main line.
- (4) CSXT and CRC lines cross each other at Sidney Junction, and CSXT proposes to construct a connection track in the southeast quadrant between the CSXT main line and the CRC main line. The connection would extend approximately 3,263 feet between approximately MP BE-96.5 on the CSXT main line between Cincinnati, OH, and Toledo, OH, and approximately MP 163.5 on the CRC main line between Cleveland, OH, and Indianapolis, IN.

CSXT argues that, if it cannot begin the early construction of these four connections, its ability to compete with NSR will be severely compromised. CSXT claims that, if it could not offer competitive rail service from New York to Chicago and New York to Cincinnati using lines that it proposes to acquire from CRC, the achievement of effective competition between CSXT and NSR would be delayed significantly. CSXT adds that, if it cannot compete effectively with NSR “out of the starting blocks,” this initial competitive imbalance could have a deleterious and long-term effect on CSXT's future operations and its ability to compete effectively with NSR, even when the connections are ultimately built. CSXT claims that, if its waiver was not granted, the time needed for construction and signal work could delay competitive operations for as long as 6 months after we take final action on the primary application.

**The NS Connections.** If we grant its waiver request, NSR will file, in three separate dockets,<sup>7</sup> petitions for exemption pursuant to 49 U.S.C. 10502 and 49 CFR 1121.1 and 1150.1(a) for the construction of connections at Alexandria, IN, Colson/Bucyrus, OH,<sup>8</sup> and Sidney, IL. NSR indicates that it would consult with appropriate federal, state, and local agencies with respect to any potential environmental effects from the construction of these connections and would file environmental reports with SEA at the time that the petitions are filed. The connections at issue are as follows:

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<sup>7</sup> These dockets would be sub-dockets 5, 6, and 7 under STB Finance Docket No. 33388.

<sup>8</sup> Although NSR in its petition describes this connection as Colson/Bucyrus, the correct designation is Colson/Bucyrus. See diagram attached to NS-1.

- (1) The Alexandria connection would be in the northeast quadrant between former CRC Marion district lines to be operated by NSR and NSR's existing Frankfort district line. The new connection would allow traffic flowing over the Cincinnati gateway to be routed via a CRC line to be acquired by NSR to CRC's Elkhart Yard, a major CRC classification yard for carload traffic. This handling would permit such traffic to bypass the congested Chicago gateway. NSR estimates that the Alexandria connection would take approximately 9.5 months to construct.
- (2) The Colson/Bucyrus connection would be in the southeast quadrant between NSR's existing Sandusky district line and the former CRC Ft. Wayne line. This new connection would permit NSR to preserve efficient traffic flows, which otherwise would be broken, between the Cincinnati gateway and former CRC northeastern points to be served by NSR. NSR estimates that the Colson/Bucyrus connection would take approximately 10.5 months to construct.
- (3) The Sidney connection would be between NSR and Union Pacific Railroad Company (UPRR) lines. NSR believes that a connection would be required in the southwest quadrant of the existing NSR/UPRR crossing to permit efficient handling of traffic flows between UPRR points in the Gulf Coast/Southwest and NSR points in the Midwest and Northeast, particularly customers on CRC properties to be served by NSR. NSR estimates that the Sidney connection would take approximately 10 months to construct.

**Comments.** Four comments opposing applicants' waiver requests were filed. Steel Dynamics, Inc. (SDI) filed comments (SDI-3) on May 6, 1997; The Allied Rail Unions (ARU)<sup>9</sup> filed comments (ARU-3) on May 15, 1997; American Trucking Associations, Inc. (ATA) filed comments on May 16, 1997; and The Council on Environmental Quality, Executive Office of the President (CEQ) late-filed comments on June 4, 1997.<sup>10</sup> On June 4, 1997, CSX filed a reply (CSX-3) to the comments of ARU and ATA; and NS filed a reply (NS-3) to the comments of SDI, ARU, and ATA. On June 6, 1997, CSX and NS filed a joint reply (CSX/NS-16) to the comments of CEQ.

*Steel Dynamics, Inc.* SDI asks us to deny NSR's waiver petition and to require NSR to file any construction application or exemption with its primary application.<sup>11</sup> SDI believes that NSR's three proposed construction connections are intertwined with the issues involved in the primary

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<sup>9</sup> ARU's membership includes American Train Dispatchers Department/BLE; Brotherhood of Locomotive Engineers; Brotherhood of Maintenance of Way Employees; Brotherhood of Railroad Signalmen; Hotel Employees and Restaurant Employees International Union; International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers; International Brotherhood of Electrical Workers; The National Conference of Firemen & Oilers/SEIU; and Sheet Metal Workers' International Association.

<sup>10</sup> As indicated in Decision No. 5, the comments filed by CEQ were due no later than June 2, 1997. We have accepted and considered CEQ's comments, and have permitted applicants to reply to the comments by June 6, 1997.

<sup>11</sup> SDI did not address the merits of CSXT's waiver petition.

application. Creating separate dockets for these connections, according to SDI, will not be an efficient use of the Board's resources nor permit an adequate review of the issues involved in the Midwest region. SDI contends that the proposed transfer of NSR's Fort Wayne line to CRC, followed by CRC's transfer of the line, under a long-term operating agreement, to CSXT, *see* Decision No. 4, slip op. at 6-7, is intended to disguise the asserted fact that the acquisition of Conrail will create duplicate Chicago-bound lines only about 25 miles apart, running through Waterloo and Fort Wayne, IN. SDI maintains that our consideration of issues as complex as NSR's proposed connections and the possible divestiture of duplicate lines should not precede our review of the primary application.<sup>12</sup>

*The Allied Rail Unions.* ARU opposes the CSX-1 and NS-1 waiver petitions as inconsistent with our review of the primary application. ARU argues that, by requesting the waivers, CSXT and NSR seek leverage for our ultimate approval of the application, while allegedly evading public scrutiny and comment on the transaction as a whole. ARU maintains that the construction projects are directly related to, and are dependent on, our approval of the primary transaction, and that the construction projects should be authorized only if the transaction itself is authorized. ARU argues that our merger regulations already confer a significant advantage on the applicants because they may immediately file for related abandonments and line transfers, even though they do not currently own the affected lines. ARU avers that, as a consequence, CSXT and NSR have no basis to seek additional advantage through their waiver requests. ARU contends that applicants offered no evidence to support their "competitive disadvantage" or "delay of public benefits" arguments. According to the unions, the applicants' arguments on competitive disadvantage are inherently inconsistent because both carriers assert that they will be disadvantaged unless their respective petitions are granted. Accordingly, ARU believes that a reasonable competitive balance can be maintained by denying both waiver petitions.

*American Trucking Associations, Inc.* ATA asks us to reserve judgment on the seven construction projects until the primary application is filed and reviewed by the parties. ATA contends that our approval of the waivers, despite any disclaimer to the contrary, could be interpreted by the public as tacit support for the primary application and inadvertently stifle full debate on the relevant issues. According to ATA, early consideration of the construction projects will unreasonably burden the parties and the Board's staff by requiring incremental participation in the transaction approval process. ATA also maintains that the competitive impact of the seven construction projects could not be adequately determined in the absence of consideration of the primary application.

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<sup>12</sup> SDI also asserts that NS has not sought waiver of our requirement that waiver petitions be filed at least 45 days prior to the filing of the primary application. *See* 49 CFR 1180.4(f)(2). SDI therefore asks us to clarify that NS may not file its application before June 16, 1997, regardless of whether NS-1 is granted. We note that, in accordance with the procedural schedule adopted in Decision No. 6 (served and published on May 30, 1997) applicants may not file their primary application until 30 days after the filing of applicants' Preliminary Environmental Report, which was filed on May 16, 1997. The primary application, therefore, may be filed only on or after June 16, 1997. SDI's request in this regard is moot.

*The Council on Environmental Quality, Executive Office of the President.* CEQ believes that the construction and operation aspects of applicants' track connection projects should be assessed at the same time so that the environmental impacts of operating these rail lines can be properly evaluated. CEQ cites its regulations at 40 CFR 1508.25(a)(1) that, when actions are "closely related," they "should be discussed in the same impact statement." CEQ also maintains that bifurcation of the related decisions appear to conflict with 40 CFR 1506.1(c)(3), which prohibits agencies from taking actions that will prejudice the ultimate decision in a programmatic environmental impact statement (EIS). In this regard, CEQ contends that, even though the proposed merger does not involve a programmatic EIS, if we grant the proposed waivers, the likelihood that we will subsequently deny the merger tends to decrease.

According to CEQ, courts have recognized the need to prepare a comprehensive EIS when actions are functionally or economically related in order to prevent projects from being improperly segmented. CEQ argues that the fact that applicants are willing to risk our eventual disapproval of the merger does not remove the interdependence of these individual decisions.

## **DISCUSSION AND CONCLUSIONS**

Applicants' waiver petitions will be granted. It is understandable that applicants want to be prepared to engage in effective, vigorous competition immediately following consummation of the control authorization that they intend to seek in the primary application.<sup>13</sup> We are not inclined to prevent applicants from beginning the construction process simply to protect them from the attendant risks. We emphasize what applicants acknowledge--that any resources they expend in the construction of these connections may prove to be of little benefit to them if we deny the primary application, or approve it subject to conditions unacceptable to applicants, or approve the primary application but deny applicants' request to operate over any or all of the seven connections. Nonetheless, given applicants' willingness to assume those risks, we will grant the waivers they seek in CSX-1 and NS-1.

ARU maintains in its comments that applicants have no basis for seeking the waivers. Our rules,

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<sup>13</sup> In this regard, we note that ARU is simply wrong in its assertion that a reasonable competitive balance can be maintained by denying both waiver petitions, so that neither carrier would face unanswered competition from the other. In their original petitions requesting waiver, both CSX and NS separately explained that these connections would permit each carrier to be able, as soon as possible following any Board approval of the primary application, to link its expanded system and compete with the other carrier in areas in which the other carrier's infrastructure would already be in place. As CSX has further explained (CSX-3 at 8):

CSX and NS have requested permission to construct connections that largely address different markets. Three of CSX's connections are intended to allow it to provide competitive services on routes linking Chicago and New York and the fourth on Northeast-Southeast routes served via Cincinnati. These are routes that NS will be able to serve immediately upon any Board approval of the Acquisition. NS's proposed connections, on the other hand, are focused on allowing it to compete with CSX in serving southwestern markets and to make use of an important Chicago-area yard used for interchanging traffic with western carriers. Denying the waiver petitions will only assure that inequality in competition, and the potential long term problems created by such inequality, will occur.

however, specifically provide for such requests, and we have entertained numerous waiver and clarification petitions in previous rail merger cases, as well as this one. *See, e.g.* Decision No. 7 (STB served May 30, 1997). ATA and SDI argue that the competitive effect of the involved connections should be considered as part of the primary application. We agree. Applicants' *operations* over these connections are interdependent with the primary application, and we will consider the competitive impact of the projects and the environmental effects of those operations along with our consideration of the primary application. Without authority to operate over the seven track connections for which the waivers are sought, applicants' construction projects alone will have no effect on competition. We emphasize that the waiver petitions that we are granting here are restricted to the construction of, and not the operation over, the seven connection projects described above.

The commenters complain that granting the waivers constitutes a prejudicial "rush to judgment" with respect to the primary application. However, as we emphasized in our May 13, 1997 request for comments, our grant of these waivers will not, in any way, constitute approval of, or even indicate any consideration on our part respecting approval of, the primary application. We also found it appropriate to note that, if we granted the waivers sought in the CSX-1 and NS-1 petitions, applicants would not be allowed to argue that, because we had granted the waivers, we should approve the primary application. We affirm those statements here.

**Environmental considerations.** CEQ has advised us not to consider the proposed construction projects separately from the operations that will be conducted over them. CEQ's recommendation is based upon its regulations at 40 CFR 1508.25(a)(1)(i)-(iii), and upon various court decisions, indicating that "when a given project effectively commits decisionmakers to a future course of action [] this form of linkage argue[s] strongly for joint environmental evaluation." *Coalition of Sensible Transp. v. Dole*, 826 F.2d 60, 69 (D.C. Cir. 1987). We believe, however, that we have the authority to consider the proposed construction projects separately, and agree with the applicants that permitting the construction proceedings to go forward now would be in the public interest and would not foreclose our ability to take the requisite hard look at all potential environmental concerns.

After reviewing the matter, we do concur with CEQ that regulatory and environmental issues concerning both the construction and operating aspects of these seven small construction projects should be viewed together.<sup>14</sup> Thus, in reviewing these projects separately, we will consider the regulatory and environmental aspects of these proposed constructions and applicants' proposed operations over these lines together in the context of whether to approve each individual physical construction project.<sup>15</sup> The operational implications of the merger as a whole, including operations

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<sup>14</sup> The applicable statute for both construction and operation of new rail lines is 49 U.S.C. 10901, which requires us to permit such actions unless they are shown to be inconsistent with the public convenience and necessity.

<sup>15</sup> We will have the information we need to do this because applicants' environmental report that will accompany the application will address the environmental impacts of both the construction and proposed operation of these projects. In addition, as discussed below, applicants will be required to file a detailed preliminary draft

over the 4 or so miles embraced in the seven construction projects, will be examined in the context of the EIS that we are preparing for the overall merger. That EIS may result in further environmental mitigating conditions. No rail operations can begin over these seven segments until completion of the EIS process and issuance of a further decision.

We believe that CEQ may have misconstrued the merger project as consisting of just two roughly equivalent elements: construction and operation. In fact, these seven construction projects, including the operations over them, are but a tiny facet of an over \$10 billion merger project. To put matters in perspective, the construction projects together amount to fewer than 4 miles of connecting track for a 44,000-mile rail system covering the eastern half of the United States.<sup>16</sup> Our approval of the construction exemptions will in no way predetermine the outcome of our merger decision. As was the case in *North Carolina v. City of Virginia Beach*, 951 F.2d 596, 602 (4th Cir. 1991) (*North Carolina*), segmentation of one phase of a larger project prior to completion of environmental review will not have “direct and substantial probability of influencing [the agency’s] decision” on the overall project. *Accord, South Carolina ex. rel. Campbell v. O’Leary*, 64 F.3d 892, 898-99 (4th Cir. 1995). Approval of the constructions will not make approval of the merger any more likely, and we have made that clear to the railroads in advance. *Compare Thomas* (where the Forest Service committed substantial *public* funds to a road project that could not be recovered absent its approval of related logging projects) *with North Carolina*, 951 F.2d at 602 (where, as here, the facts reflect that the city proposing the project accepted the risk that funds expended or constructed could be lost if the overall project were not approved).

Nor will separate consideration and approval of these small construction projects in any way undermine our ability to give meaningful and thorough consideration to all environmental issues surrounding the larger merger proposal. We have not, by segmenting these construction projects, broken down the environmental impacts of the merger into insignificant pieces escaping environmental review. *See Swain v. Brineger*, 542 F.2d 364 (7th Cir. 1976). Indeed, we are preparing an EIS for the overall merger, and we will undertake appropriate environmental documentation for each of the seven individual construction projects. Our approach is appropriate because the environmental impacts of these constructions tend to be localized, whereas the impacts of the merger will affect a much larger area (quite likely the Eastern United States).

In sum, separate consideration of the seven construction projects and their environmental impacts should not be precluded by 40 CFR 1508.25 because: (1) approval of the construction projects will not automatically trigger approval of the merger; moreover, we have already

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environmental assessment (PDEA) for each of the seven projects.

<sup>16</sup> Applicants point out that much of the construction on these short segments will take place within existing rights-of-way, suggesting that they will be unlikely to have significant environmental impacts. *Compare Thomas v. Peterson*, 753 F.2d 754 (9th Cir. 1985) (*Thomas*) (where the Forest Service proposed to construct a road through a pristine wilderness). Applicants also suggest that there are no alternative routings for these projects. That issue, however, has not yet been determined; it will be examined in the environmental assessments (EAs) or other environmental documents that will be prepared for each of these construction projects.

determined to do an EIS for the merger and separate approval of these construction projects will in no way affect that decision; and (2) these appear to be “garden-variety connection projects” that will proceed at the railroads’ financial risk, independent of the much larger merger proposal.

Having decided to grant the petitions for waiver, we will now set out some details of how we plan to proceed. In order to fulfill our responsibilities under the National Environmental Policy Act (NEPA) and related environmental laws, we will require applicants to submit certain information on the environmental effects of the construction and operation of the seven proposed connections. As noted, the applicants will file an environmental report with the primary application that will address all of the construction projects associated with the proposed merger, including the seven connections discussed in this decision.

In addition, we will require that applicants provide a specific PDEA for each individual construction project covered by this decision. Each PDEA must comply with all of the requirements for environmental reports contained in our environmental rules at 49 CFR 1105.7. Also, the PDEA must be based on consultations with our Section of Environmental Analysis (SEA) and the federal, state, and local agencies set forth in 49 CFR 1105.7(b), as well as other appropriate parties. The information in the PDEA should be organized as follows: Executive Summary; Description of Each Construction Project Including Proposed Operations; Purpose and Need for Agency Action; Description of the Affected Environment; Description of Alternatives; Analysis of the Potential Environmental Impacts; Proposed Mitigation; and Appropriate Appendices that include correspondence and consultation responses. If a PDEA is insufficient, we may require additional environmental information or reject the document. We advise the applicants to consult with SEA as soon as possible concerning the preparation and content of each PDEA.

As part of the environmental review process, SEA will independently verify the information contained in each PDEA, conduct further independent analysis, as necessary, and develop appropriate environmental mitigation measures. For each project, SEA plans to prepare an EA, which will be served on the public for its review and comment. The public will have 20 days to comment on the EA, including the proposed environmental mitigation measures. After the close of the public comment period, SEA will prepare Post Environmental Assessments (Post EAs) containing SEA’s final recommendations, including appropriate mitigation. In making our decision, we will consider the entire environmental record, including all public comments, the EAs, and the Post EAs.

Should we determine that any of the construction projects could potentially cause, or contribute to, significant environmental impacts, then the project will be incorporated into the EIS for the proposed merger and will not be separately considered. In order to provide SEA with adequate time to incorporate the proposed connections into the draft EIS, if warranted, applicants must file the PDEAs no later than Day F+75 under the procedural schedule established in Decision No. 6.

This action will not significantly affect either the quality of the human environment or the

conservation of energy resources.

*It is ordered:*

1. The CSX-1 and NS-1 petitions for waiver are granted.
  
2. NSR and CSXT must serve copies of this decision on the Council on Environmental Quality, the Environmental Protection Agency's Office of Federal Activities, and the Federal Railway Administration, and certify that they have done so within 5 days from the date of service of this decision.
  
3. This decision is effective on the date of service.

By the Board, Chairman Morgan and Vice Chairman Owen.

Vernon A. Williams  
Secretary

## **APPENDIX D**

### **METHODOLOGIES**

The following environmental impact areas were evaluated for the proposed Bucyrus connection project: land use, socioeconomics and environmental justice, transportation, safety, surface water resources and wetlands, biological resources, air quality, noise, cultural resources, and energy. The methods utilized in the assessment of impacts for each of these categories, with an explanation of the evaluation criteria, are provided below.

Environmental scientists visited the site to assess land use, vegetation and other characteristics of the area. Cultural resource specialists also visited the site. During the site visits the scientists and cultural resource specialists took photographs of the proposed construction site and surrounding area. Information was also obtained from published reference materials and from federal, state and local agencies.

#### **LAND USE**

Land use information was obtained from site visits, U.S. Geological Survey (USGS) topographic maps and from aerial photographs. Land use within and adjacent to the proposed construction area was determined. Buildings (such as residential and commercial buildings, schools and churches) near the proposed construction site were also noted due to possible sensitivity to noise disturbance or incompatibility with construction. Contacts were made with the county planning agency to obtain information on local planning and zoning requirements to determine if rights-of-way would be consistent with any such requirements. Contacts were made with the U.S. Bureau of Indian Affairs to determine the presence of any officially recognized Native American tribes or reservations near the site.

#### **USGS Topographic Maps**

USGS topographic maps were utilized during the site visits for notation of land use, and for preparation of the figures presented. Proper place names of roads, creeks, and water bodies not readily evident during the site visits were developed from information on these maps.

#### **NRCS Maps**

The United States Department of Agricultural Natural Resources Conservation Service (NRCS, formerly known as the Soil Conservation Service) has created a national database of prime farmland. The local NRCS office was contacted and requested to provide soil surveys, maps or drawings indicating the location of prime farmland at or in the vicinity of the project. These maps or drawings were reviewed, and the areas of prime farmland adjacent to or within 500 feet of the center line of the railway were inventoried to determine approximate areas or lengths of prime farmland in the area.

#### **Flood Zone Maps**

The Federal Emergency Management Agency (FEMA) publishes maps showing areas subject to flooding. These maps were previously published and distributed by the U.S. Department of Housing and Urban Development (USDHUD) and are periodically updated and revised. Maps that cover each proposed project area were obtained and reviewed to determine which portions of the line would be located within the 100-year and 500-year flood plains.

#### **Evaluation Criteria**

The following criteria were used to assess the significance of land use impacts:

##### Land Use Consistency and Compatibility

- The severity of visual, air quality and noise impacts on sensitive land uses.
- Interference with the normal functioning of adjacent land uses.
- Alteration of flood water flow that could increase flooding in adjacent areas.
- Consistency and/or compatibility with local land use plans and policies.

Prime Agricultural Land

- Permanent loss of Natural Resources Conservation Service-designated prime farmland.

**SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE**

Executive Order 12898, entitled “Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations,” directs federal agencies to analyze the environmental effects of their actions on minority and low-income communities. Significant and adverse effects which have a high and disproportionate impact on these communities should be identified and addressed.

In this EA, potential impacts of the proposed construction of a rail line connection in Bucyrus, Ohio on minority and low-income communities were considered, along with the potential impacts associated with an alternative alignment. One of the primary goals in selecting alternative alignments for the proposed project was to minimize impacts on surrounding residents. Information was obtained through site visits and demographic research. While the “no-build” alternative would have no change in potential impacts on the community in the vicinity of the proposed connection, neither would it provide any of the anticipated benefits of the connection described.

In order to study the effects of the proposed construction on the population in the vicinity of the project, information on racial composition and average income level in the area was obtained from the U.S. Census Bureau TIGER/Line files and other statistical sources. From the Census files, the proposed construction was determined to be located in one census block. Using the census block number, Summary Tape Files were utilized to determine and analyze the poverty status, race and income for the relevant block.

The proposed project area and an alternative alignment for the project were studied to determine the number of new residences and other sensitive receptors within the Ldn 65 dBA contour around the connection affected by an increase of two dBA, since noise would be the predominant potential impact on nearby sensitive receptors. The assessment also considered whether any of these sensitive receptors would be subject to additional noise from the proposed connection, and whether they are currently affected by equal or greater noise from existing operations. Safety concerns were also taken into consideration. Potential increases in the number of grade crossings were examined, as were the nature and operation of the proposed grade crossings and the potential traffic they would experience.

### **Evaluation Criteria**

The following criteria was used to determine impacts from the proposed project to socioeconomics and environmental justice:

- Reviewed demographic and income data from the 1990 Census to compare the population of the area of the proposed construction with that of the Bucyrus, Ohio area.
- An environmental justice effect is determined to be significant if an adverse effect of the proposed construction falls disproportionately on low-income or minority populations.

### **TRANSPORTATION**

The evaluation criteria used to determine potential impacts on transportation includes:

- The need for new grade crossings.
- Modifications of existing grade crossings.

### **Grade Crossings**

Delays at grade crossings are a function of the number of trains per day passing over a crossing, the time it takes for a train to pass the crossing, and the type of crossing warning device. The study team calculated potential changes in vehicle delay at grade crossings where average daily traffic (ADT) volumes are 5,000 or greater. The team concluded that for highways with ADT volumes below 5,000, the potential effect of increased train traffic would be experienced by very few drivers and the additional vehicular delay would be minimal.

### **SAFETY**

Railroad safety precautions during construction work are discussed. Safety impacts are discussed in the following general categories:

- Train accidents, derailments, and other incidents;
- Shipments of hazardous commodities; and
- Hazardous waste sites and hazardous material releases.

### **Public Health and Safety**

Railroad operations affect public health and safety when accidents occur. Delays also occur at grade crossings (which could affect the time required to respond to an emergency, or affect the judgment of motorists concerning their ability to cross the tracks safely); and releases of hazardous materials sometimes occur.

### **Hazardous Waste Sites**

Railroad records or information databases were examined to determine if there are known hazardous waste sites or sites where there have been hazardous materials spills at the proposed construction site. The information searches of federal and state environmental databases were used to identify known sites of environmental concern within 500 feet of the proposed construction. EDR searched the following databases:

- National Priority List (NPL)
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
- Resource Conservation and Recovery Information System - Treatment, Storage, or Disposal (RCRA-TSD) sites
- Emergency Response Notification System (ERNS) spill sites
- State Priority List (SPL)
- State Licensed Solid Waste Facilities (SWF/LF)
- State Inventory of Leaking Underground Storage Tanks (LUST)
- State Inventory of reported spills (SPILLS)
- Orphan or unmappable sites list

The reports were reviewed to determine if any of these sites would be impacted by the proposed construction. Site visits noted any obvious indications of potential hazardous waste sites within the construction area.

### **Transportation of Hazardous Materials**

The existing lines were evaluated to determine if they are hazardous material key routes. NS' current train accident ratio (1.93 train accidents per million train miles) was applied to the annual number of trains projected to operate over the connection and the length of the connection to calculate the probability of a train accident on the connection.

### **Evaluation Criteria**

The following criteria was used to determine the effects of the proposed project on safety issues:

- The effect of the proposed connection on the transportation of hazardous materials.
- The likelihood of encountering hazardous waste sites during construction.
- The likelihood of a hazardous material release during construction.

### **WATER RESOURCES**

Identification of the types and extent of surface water features occurring within 500 feet of the center line along the proposed Bucyrus construction was completed using a variety of information sources.

Surface water resources were primarily identified from site inspection and interpretation of hydrologic features delineated on USGS topographic maps and NWI maps. The other information sources described below were used to confirm and/or refine the locations of these features.

#### **USGS Topographic Maps**

USGS topographic maps indicate, among other items, the types and extent of water features on the landscape. These features include permanent and intermittent streams, water bodies, wetlands, tidal channels, mudflats, sewage-treatment ponds, channels, culverts, and ditches. Water resources located within and immediately adjacent to the railroad right-of-way were assessed for this project. Each crossing of a water resource was counted as required by 33 CFR Section 330.2 (I).

### **National Wetlands Inventory Maps**

NWI maps show various water features with a focus on wetland resources. The inventory was completed by USFWS through a stereoscopic analysis of high altitude aerial photography and delimitation of wetland types on USGS topos. Wetlands are classified by USFWS in accordance with *Classification of Wetlands and Deepwater Habitats of the United States*. A particular wetland is located and classified in detail on NWI maps by a sequence of alphabetical and numerical symbols based on the attributes of the wetland. A comprehensive explanation of the classification system is provided in the map legend. This classification system includes a broad range of the types and extent of wetland resources, as well as other water features. However, for this evaluation, wetlands were identified as rivers, lacustrine (reservoirs, lakes) or palustrine (any vegetated wetland). Palustrine wetlands were further identified as forested, shrub/scrub, or emergent (containing herbaceous vegetation) wetlands. There are often differences between the USFWS definition of a “wetlands” and the definitions of various federal, state, and local regulatory agencies. All NWI wetlands that occur within 500 feet of the proposed construction are depicted on figures.

### **Soil Survey Maps**

Soil surveys have been completed by NRCS for a large number of counties in the United States. Maps have been prepared for each survey that show the types and extent of soil types. A subset of the soils mapped by NRCS is classified as “hydric;” that is, soils subjected to prolonged periods of flooding, ponding or saturation. The occurrence of a hydric soil provides an indication that an area may be a wetland. Information from the soil survey maps was used to cross-reference other sources of information to better understand the soils and hydrologic conditions at select locations.

### **Site Visits**

The proposed construction site was inspected and reviewed in the field by environmental scientists. Information about surface water resources and other areas of interest was collected during the inspections. Field notes and photographs taken during the inspections were retained for later review and utilized to amend and refine information derived from other sources.

### **Evaluation Criteria**

The following criteria were used to assess the potential impacts to surface water resources and wetlands that could result from the proposed construction project:

- Alteration of creek embankments with rip-rap, concrete, and other bank stabilization measures.
- Temporary or permanent loss of surface water area associated with the incidental deposition of fill.
- Downstream sediment deposition or water turbidity due to fill activities, dredging, and/or soil erosion from upland construction site areas.
- Direct or indirect destruction and/or degradation of aquatic, wetland, and riparian vegetation/habitat.
- Degradation of water quality through sediment loading or chemical/petroleum spills.
- Alteration of water flow that could increase bank erosion or flooding, uproot or destroy vegetation, or affect fish and wildlife habitats.

The extent and duration of impacts to surface water resources and wetlands resulting from the project would depend primarily on the type of work to be completed and the size of the project. The overall effect could be lessened by avoiding important resources and minimizing impacts to the extent practicable, and by implementing the mitigation measures. Prior to initiating construction, regulatory agencies would be consulted regarding the need to obtain permits, such as U.S. Army Corps of Engineers’ (COE) Section 404 permits, National Pollution Discharge Elimination System (NPDES) permits, and state-required permits or agreements, as appropriate.

### **BIOLOGICAL RESOURCES**

Information regarding biological resources potentially occurring at, or in the immediate vicinity, of the proposed project (within 500 feet of the center line) was collected from a variety of sources, including USGS topographic maps, NRCS soil survey maps, lists of threatened and endangered species, reference books on regional flora and fauna, and information databases. In addition, federal and state agencies

such as the U.S. Fish and Wildlife Service and Ohio Department of Natural Resources were consulted, and specific information concerning the potential occurrence of sensitive plants and animals in the vicinity of the proposed project was solicited.

Site visits were conducted at the project site to evaluate biological resources. These evaluations included determinations as to the occurrence or potential occurrence of sensitive species and habitat for sensitive species, overall value to wildlife, and use of the area as a migration corridor for animals.

**Evaluation Criteria**

The following evaluation criteria were utilized to assess the potential impacts to biological resources resulting from the proposed projects:

- Loss or degradation of unique or important vegetative communities.
- Harm to or loss of individuals or populations of rare, threatened or endangered plants or animals.
- Disturbance of nesting, breeding or foraging areas of threatened or endangered wildlife.
- Loss or degradation of areas designated as critical habitat.
- Loss or degradation of wildlife sanctuaries, refuges or national, state or local parks/forests.
- Alteration of movement or migration corridors for animals.
- Loss of large numbers of local wildlife or their habitats.

Sensitive animal species with potential to occur in the vicinity of the project may be impacted by construction activities. A determination as to the level of impact will depend on many factors including the availability of suitable habitat, previous surveys, and comments from agencies.

Parks, forest preserves, refuges and sanctuaries were identified within one mile of the proposed construction. Impacts to these areas were determined based on their distance from the proposed constructions and the degree to which rail construction, operation and maintenance would disturb or disrupt activities at these areas.

**AIR QUALITY**

Emissions from trains have the potential to impact air quality. STB regulations contain thresholds for air quality evaluations related to rail traffic increases. If STB thresholds would be met or exceeded, the effects on air pollutant emissions must be analyzed. The air quality methodologies contained in this section were used to calculate the air pollutant emissions from the proposed construction. Analyses were conducted for areas with activity increases above the following STB thresholds, as specified in 49 CFR 1105.7(e):

Activity	Threshold
<b>Attainment Areas (49 CFR 1105.7(e)(5)(i))</b>	
Rail line segment	Increase of 8 trains/day or 100% as measured in gross tons miles annually

**Air Quality Methodology**

The increase in emissions for the proposed connection was calculated using the total gross ton increase expected on the connection and the length of the connection. These values, when multiplied together, will provide the gross ton-mile increase for that connection. Next, the increase in total gallons of diesel fuel consumed for the connection will be obtained by dividing the gross ton-mile increase by the fuel efficiency factor 702.9 gross ton-miles per gallon on the NS system. The corresponding annual emission increases will be estimated by multiplying the annual fuel consumption for the connection by emission factors. Criteria pollutant emission factors were obtained from emission rates provided in USEPA’s “Emission Standards for Locomotives and Locomotive Engines; Proposed Rule”<sup>17</sup> dated February 11, 1997. This proposed rule provides emission rates for line haul and switch locomotives which were used by USEPA to determine the emission standards in the proposed rule. The emission rates for line haul locomotives were converted to units of pounds of pollutant per 1000 gallons of diesel fuel consumed, and are provided below:

Hydrocarbons (HC) <sup>1</sup>	21.0	
Carbon Monoxide (CO) <sup>1</sup>	62.9	
Nitrogen Oxides (NO <sub>x</sub> ) <sup>1</sup>	566.4	
Sulfur Dioxide (SO <sub>2</sub> ) <sup>18</sup>	36.7	
Particulate Matter (PM <sub>10</sub> ) <sup>1</sup>	14.3	
Lead (Pb) <sup>19</sup>		0.0012

This methodology will be employed for all criteria pollutants on this proposed connection since it will experience an increase in activity equal to or greater than the STB thresholds.

The following sample calculation for a rail line segment illustrates the emission estimation procedure for hydrocarbons:

$$\begin{aligned}
 & [16.0 \text{ miles (segment length)}] \times \left[ \frac{45.17 \times 10^6 \text{ gross tons (increase)}}{\text{year}} \right] \times \\
 & \left[ \frac{1 \text{ gallon}}{702.9 \text{ gross ton miles}} \right] = 1.03 \times 10^6 \frac{\text{gallons diesel fuel consumption (increase)}}{\text{year}} \\
 & \left[ 1.03 \times 10^6 \frac{\text{gallons}}{\text{year}} \right] \times \left[ \frac{21 \text{ lbs (HC)}}{1000 \text{ gallons}} \right] \times \left[ \frac{1 \text{ ton}}{2000 \text{ lb}} \right] = 10.80 \frac{\text{tons(HC)}}{\text{year}}
 \end{aligned}$$

**Emission Calculation Assumptions:**

- A fuel efficiency factor of 702.9 gross ton-miles per gallon will be used on the NS system.
- The density of the fuel is 7.05 lbs per gallon.
- The fuel sulfur content is 0.26 percent by weight.
- The fuel heat content is 140,000 Btu per gallon.
- The fuel efficiency factor is 0.37 lbs of fuel per HP-hr.
- Emission factors for HC, CO, NO<sub>x</sub>, and PM<sub>10</sub> are based on emission rates provided in USEPA’s proposed rule on locomotive emission standards. It is conservatively assumed that all particulate matter emissions represent PM<sub>10</sub>.

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<sup>17</sup>United States Environmental Protection Agency, February 11, 1997. 40 CFR Parts 85, 89 and 92. Emission Standards for Locomotive and Locomotive Engines; Proposed Rule. The emission factors incorporate a fuel efficiency of 0.37 lbs of fuel per HP-hr and a density of 7.05 lbs per gallon.

<sup>18</sup>SO<sub>2</sub> emissions are based on a fuel sulfur content of 0.26 percent by weight and a density of 7.05 lbs per gallon.

<sup>19</sup>Lead emissions are based on Table 1.3-11 of AP-42 (8.9 lbs Pb/10<sup>12</sup> Btu.) The heat content of the fuel is 140,000 Btu per gallon.

- Lead emissions are based on the AP-42 emission factor of 8.9 lbs of lead per  $10^{12}$  Btu.

Potential impacts to air quality are discussed below.

### **Construction**

During construction, the air quality in the vicinity of the proposed construction could be affected by fugitive dust and vehicle emissions. Increases in fugitive dust could occur due to grading and other earthwork necessary for rail bed preparation or removal activities. Emissions from heavy equipment and construction vehicles would also occur. These effects on air quality would be temporary and limited to the period of construction or abandonment. Additionally, the emissions from the small number of vehicles and equipment would be insignificant compared to the overall train and vehicle emissions in the project areas. Potential impacts would be minimized by good construction practices that would include dust control and vehicle maintenance measures.

## **Operation**

The amount of train traffic operating over the proposed project site meets or exceeds STB thresholds for air quality; therefore air pollutant emissions were evaluated.

## **Maintenance**

Right-of-way maintenance activities would result in emissions from vehicles and equipment used to perform maintenance activities. Maintenance activities would be confined to the rail line and occur sporadically for short periods throughout the year. Emissions during maintenance activities would be insignificant compared to the existing emissions in the area and would not significantly impact air quality.

## **Evaluation Criteria**

The following criteria were used to assess the potential impacts to air quality that could result from the proposed construction project:

- Increase in levels of pollutant emissions (e.g., hydrocarbons, carbon monoxide, sulfur dioxide, nitrogen oxide, and particulate matter) from the operation of construction equipment and vehicles.
- Effects related to train operations over the NS and UP line segments adjoining the connection, to the extent they meet the Board's thresholds for analysis.
- Evaluation of the potential for air quality effects from fugitive dust emissions.
- Air quality effects are considered to be adverse if the proposed construction would lead to long-term increases in pollutant emissions or excessive fugitive dust emissions.

## **NOISE**

### **Construction**

The proposed project would consist of construction activities that last for, at most, a few months. Temporary increases in noise level would occur during these operations, but the noise level would be similar to that of normal track maintenance procedures. Thus, the construction activities are not expected to result in significant adverse noise impacts.

## NOISE LEVEL THRESHOLDS

The STB regulations specify that noise studies be done for all connections where traffic will increase by at least 100% as measured by annual gross tons miles or at least 8 trains per day.

The noise increase is to be quantified for all sensitive receptors (schools, libraries, residences, retirement communities and nursing homes) that are in the project area where these thresholds will be surpassed.

The Day-Night Sound Level, abbreviated  $L_{dn}$  or DNL, represents an energy average of the A-weighted noise levels occurring during a complete 24-hour period. An increase in  $L_{dn}$  of 3 dBA could result from a 100 percent increase in rail traffic, a substantial change in operating conditions, changed equipment, or a shift of daytime operations to the nighttime hours. Nighttime noise often dominates  $L_{dn}$  because of a weighting factor added to nighttime noise to reflect most people being more sensitive to nighttime noise. In calculating  $L_{dn}$ , the nighttime adjustment makes one event, such as a freight train passby, occurring between 10 p.m. and 7 a.m., equivalent to ten of the same events during the daytime hours.

There are some track segments where the STB threshold for a noise study is exceeded, but the total change in noise exposure would be insignificant. The approach taken was to analyze those areas where the projected increase in train volume or change in train mix would be expected to cause: (1) more than a marginal change in noise exposure, and (2) cause a significant increase in the number of noise sensitive receptors within the  $L_{dn}$  65 contour. For this study, any increase in  $L_{dn}$  less than 2 dBA was considered insignificant. A 2 dBA threshold was selected because:

1. Near railroad facilities, a plus or minus 2 dBA variation in  $L_{dn}$  is common because of the normal variation in factors such as: operating condition, operating procedures, weather, time of day, and equipment maintenance.
2. In most cases, a 2 dBA increase in noise exposure would cause only a small change (approximately 10%) in the number of residences within the  $L_{dn}$  65 contour. This is because noise impacts from train operations tend to be localized to the residences closest to the tracks. The acoustic shielding provided by the first row or two of residences is usually sufficient to keep noise exposure below  $L_{dn}$  65 at residences that are farther away.
3. Although a 2 dBA increase in noise exposure is often considered an insignificant change, it was selected as a conservative screening level for this study and for previous studies.

## Approach

The overall goal of the noise study is to identify noise sensitive land uses where the projected change in operations could result in noise exposure increases that meet or exceed the STB thresholds. This assessment provides estimates of the number of noise-sensitive receptors where there will be a significant increase in noise exposure and the STB thresholds will be exceeded.

Following is an outline of the approach that has been used for the assessment of potential noise impacts:

1. Develop noise models: Models for estimating rail line noise have been defined for significant noise sources. For connections, the dominant noise sources are the normal noise from freight and passenger train operations and the audible warning signals at grade crossings. Curves with small enough radii for substantial wheel squeal are normally lubricated to control wear and noise.
2. Identify sensitive receptors and existing noise conditions: Noise sensitive land uses were identified through review of USGS maps, aerial photographs and site visits.
3. Project existing and future noise exposure: Information on distances and propagation paths to sensitive receptors and existing and future operation plans have been used to estimate noise exposure in terms of the  $L_{dn}$ . Instead of doing noise projections for each sensitive receptor,  $L_{dn}$  65 contours were drawn on the maps or aerial photographs. For all of the rail segment noise projections, the average train was assumed to be 5000 feet long.

It was assumed that train horns are sounded starting ¼ mile before all grade crossings and continuing until the locomotive is through the grade crossing.

4. Count noise sensitive receptors: Approximate counts were made of the number of residences, schools, and churches within the  $L_{dn}$  65 contour for both the pre- and post-construction train volumes using site visits. The final result of this analysis is an estimate of the total number of sensitive receptors likely to be affected by increased noise exposure by projected NS operations.

#### **Measurement Data Used for Noise Models**

Noise measurements of existing NS equipment were taken to provide a solid basis for the noise projections. The measurements included train noise from line-haul rail lines, and noise near grade crossings to document noise levels due to sounding train horns prior to grade crossings.

Controlled noise tests were conducted on NS using a level stretch of track in China Grove, NC. This single track has high freight traffic and is located next to an open level field. Noise measurements were made over a four-day period while trains were operated at a speed specified for the day, i.e., 20, 35, and 50 mph. Speeds were verified with a radar gun for each train.

Measurements were made at a second location on the fourth day to measure the influence of grade. Engineers were allowed to operate their trains at their normal speed and a radar gun was used to clock the train speed.

All instruments are state-of-the-art. The entire measurement setup was properly field calibrated prior to measurements.

Noise levels of the entire train were measured at four perpendicular distances from the track using an array of microphones at 50, 100, 150, & 200 feet from the track centerline. Microphones were mounted on tripods and their AC outputs were cabled to a nearby trailer where a four-channel Hewlett Packard Dynamic Analyzer was used to measure the  $L_{eq}$  of each train. This microphone array was used to determine the wavefront spreading rate [rate of noise reduction versus distance]. This rate was used in conjunction with a reference location to predict the distance from the track to the  $L_{dn}$  65 dBA contour.

This microphone array was supplemented with two precision sound level meters that measured the  $L_{eq}$ s and SELs of the locomotives and also of the cars at 150 feet from the track. This was a supplementary measurement that was not used in the model but it was used for cross-checks on the train noise data.

The definition of the SEL is:

$$SEL = L_{eq} + 10\text{Log}(t)$$

where:

SEL = Single Event Level, dBA

$L_{eq}$  = Equivalent Energy Level, dBA

t = time, seconds

The  $L_{eq}$  represents the average sound pressure level that contains the same equivalent energy as the fluctuating sound level of the event. In simple terms, the high and lows of the fluctuating noise are characterized by a single average number. For example, as a train passes by, the noise will vary as the locomotives and cars go by. This fluctuating noise is characterized by a single sound level that is representative for the entire train. This averaging process is done on a logarithmic basis since decibels are involved.

The SEL represents the total energy contained in the event. For example, a train can be characterized by the  $L_{eq}$  and the amount of time that it takes to pass a measurement point. When the SEL is computed, it represents the total energy of the train. For example if two otherwise identical trains passed by, but one was longer than the other, the longer one would have a larger SEL. If one train was twice the length of another train, the SEL would be 3 dBA larger. This assumes that all locomotives and individual cars produce the same noise level. Again, the logarithmic averaging process is involved, i.e., a doubling produces a 3 dBA change.

The  $L_{eq}$  corresponds to the loudness of the event whereas the SEL does not. The effects of speed, loudness, time duration, and fluctuating level are conveniently represented by a single number. The SEL is convenient for the computation of the  $L_{dn}$ . Alternately, the  $L_{eq}$  and time duration could be used with equal ease and their combination would yield the same  $L_{dn}$  result.

Measurements were made by the firm of William R. Thornton, Ph.D., P.E. in association with Earshen & Angevine Acoustical Consultants Inc. All work was done by two noise control engineers who are full members of the Institute of Noise Control Engineers, INCE.

Horn noise was measured at a rail crossing in another part of China Grove at a distance of 150 feet from the track. Measurements were made at the midpoint between the ¼-mile marker and the rail crossing. The SEL and  $L_{eq}$  of the horn were measured as the train approached and departed this measurement station. This situation represents the worst case for noise for a person living near a crossing.

Measurements were also made at a nearby section of 0.9 percent grade to determine the effects of grade on noise emissions.

The detailed results of the train passby noise measurements at the four microphone positions are given in Table N-1. Measurement results of the 0.9 percent grade train passbys and the train horn measurements are listed in Tables N-2 and N-3, respectively. Finally, all measured NS noise levels are summarized in Table N-4, energy-averaged and normalized to a distance of 100 feet from track centerline.

The results from the noise survey of NS trains showed that the average attenuation rate was 4.8 dBA per doubling of distance. In other words, the noise level from a train passby 200 feet from the track would be 4.8 dBA less than the noise level 100 feet from the track. This represents the attenuation of noise caused by the dissipating effects of the atmosphere and ground. This is consistent with the attenuation rate that would be expected for train noise propagating over soft ground.

Noise from train horns were found to be relatively consistent for the six trains that were measured. At 150 feet from the track, the average  $L_{eq}$  was 93 dBA, the average duration was 15.6 seconds, and the energy average SEL was 108 dBA.

**Table N-1  
Noise Data for NS Trains**

Event Time	Speed (mph)	Duration (seconds)	No. of Loco-motives	No. of Rail Cars	Measured L <sub>eq</sub> at Distance from Tracks (dBA)			
					50 ft	100 ft	150 ft	200 ft
919	20	60	2	14	79.8	75.7	73.1	70.9
1023	19	207	2	93	81.2	77.6	75.2	73.9
1053	20	202	??	100	79.8	76.0	73.3	72.0
1214	20	166	3	61	72.8	69.4	66.9	65.7
1243	20	58	2	24	73.1	69.7	67.2	66.4
1353	18	145	2	67	80.3	76.9	73.8	72.1
1624	20	316	2	128	77.9	74.8	72.1	70.9
1731	19	239	2	85	78.4	74.6	72.6	70.4
1752	20	269	3	97	78.9	74.7	72.6	71.0
1802	20	167	2	45	71.5	67.8	65.8	64.3
1913	18	160	2	86	79.7	76.0	73.2	71.9
--	20	240	2	80	79.3	74.2	72.9	70.1
<b>Average:</b>	<b>20</b>	<b>185</b>	<b>2</b>	<b>73</b>	<b>78.6</b>	<b>74.8</b>	<b>72.3</b>	<b>70.7</b>
1035	25	90	2	38	76.0	71.8	68.8	67.2
1204	33	163	3	127	84.0	79.9	76.5	74.7
1226	32	50	2	36	74.6	70.6	67.3	65.8
1307	30	92	2	37	81.6	77.8	74.8	73.0
1326	34	39	2	39	79.6	75.8	72.6	70.9
1424	34	30	3	69	84.9	81.5	79.2	77.1
1453	33	101	2	97	81.2	76.8	73.3	71.2
1610	34	119	2	91	84.8	80.9	78.3	76.5
1724	35	143	2	124	82.9	78.9	76.4	74.1
1949	35	130	2	76	80.8	77.4	74.9	72.7
2000	35	104	3	57	84.8	80.7	78.2	75.9
2027	33	130	3	97	84.0	79.7	76.3	73.6
<b>Average:</b>	<b>33</b>	<b>99</b>	<b>2.3</b>	<b>74</b>	<b>82.6</b>	<b>78.7</b>	<b>75.9</b>	<b>73.8</b>
1036	50	54	2	71	84.0	80.5	77.1	75.0
1154	43	122	4	136	87.2	84.0	80.2	77.7
1301	42	102	4	110	88.1	85.2	82.0	79.3
1322	47	23	3	28	85.6	82.4	78.8	76.5
1339	47	38	2	47	86.7	82.8	77.8	74.8
1347	45	80	4	76	82.4	79.5	76.7	74.7
1447	44	76	5	92	87.3	84.2	81.1	79.4
1503	48	41	2	33	85.3	81.7	78.2	74.9
1523	49	51	1	56	80.7	77.2	73.8	71.6
1535	45	111	4	121	89.5	86.2	82.6	79.7
1910	45	80	2	70	83.2	79.4	76.6	74.1
1921	41	154	2	138	87.1	83.1	80.1	78.1
<b>Average:</b>	<b>46</b>	<b>78</b>	<b>2.9</b>	<b>87</b>	<b>86.2</b>	<b>82.9</b>	<b>79.4</b>	<b>77.0</b>

**Table N-2  
Noise Data from NS Trains on a 0.9 Percent Grade**

Event Time	Speed (mph)	Duration (sec)	No. of Locomotives	No. of Rail Cars	Direction of Travel	Measured $L_{eq}$ at Distance from Tracks (dBA)			
						50 ft	100 ft	150 ft	180 ft
1019	30	120	1	95	--	80.2	78.1	76.0	75.8
1226	53	70	3	44	--	76.8	75.5	73.1	73.0
1257	48	50	2	42	--	79.0	78.7	76.0	75.4
1315	27	166	3	59	--	78.3	76.7	74.6	73.9
1406	33	106	2	59	uphill	78.9	77.7	75.9	77.2
1636	31	161	3	87	uphill	81.3	80.3	76.9	77.2
1450	43	72	3	70	downhill	80.0	77.5	75.4	75.5
1722	42	164	2	132	downhill	79.6	77.6	74.9	74.6

**Table N-3  
Horn Noise Data from NS Trains**  
(all measurements taken 150 ft from track centerline)

Time	Direction	$L_{eq}$ (dBA)	$L_{max}$ (dBA)	SEL (dBA)	Duration (seconds)
1030	South	93.0	99.0	105.0	16.0
1049	North	91.5	99.5	103.5	15.7
1222	South	92.0	101.0	104.0	16.0
1238	North	94.7	100.9	107.0	17.0
1304	South	91.2	96.6	101.1	9.3
1400	South	95.4	102.3	108.3	19.6

**Table N-4  
Average Values Calculated from NS Train Noise Data**  
(all sound levels normalized to 100 ft from track centerline)

Source	# of Trains	Energy Average Sound Level, dBA	
		Noise Metric	Average Level
Train Horns	6	$L_{max}$	103
		SEL	108
		$L_{eq}$	96
Train Passby on level track, 20 mph (no horn)	12	$L_{eq}$	75
Train Passby on level track, 35 mph (no horn)	12	$L_{eq}$	78
Train Passby on level track, 50 mph (no horn)	12	$L_{eq}$	82
Train Passby up 0.9% grade, 31 mph (no horn)	2	$L_{eq}$	79
Train Passby down 0.9% grade, 45 mph (no horn)	2	$L_{eq}$	78

The NS noise model was based on SEL and  $L_{dn}$  levels measured in the field at different speeds, train lengths, numbers of locomotives, different grades, and train horns.

Noise from rail line construction and operation has the potential to impact noise receptors along the rail line. Sensitive noise receptors include residences, schools, churches, libraries and hospitals. Residences within 500 feet and other sensitive noise receptors (schools, churches, hospitals, libraries) within 1,250 feet (0.25 mile) of the proposed project were identified since these would be the most likely affected by noise from construction activities and any subsequent rail operations. For construction projects expected to exceed STB noise thresholds, the number of noise receptors experiencing average daily noise levels (Ldn) of 65 decibels or greater was determined.

### **Evaluation Criteria**

The following criteria was used to determine potential impacts from the proposed project:

- Identification of noise-sensitive land uses where changes in operation could result in noise exposure increases.
- Identification of noise sensitive receptors (e.g. residences, schools, hospitals, libraries).

### **CULTURAL RESOURCES**

In order to evaluate the potential impacts to historic and cultural resources, the Ohio State Historic Preservation Officer (SHPO) was sent a letter requesting information on known historic properties or archaeological sites potentially affected by the project. The SHPO was asked to indicate whether further actions are needed to identify historic properties. Documentation of historic and cultural resources in the project area was requested and a determination of the potential impacts of the project on any NRHP eligible structures was requested.

In accordance with 49 CFR 1105.8, the proposed construction is shown on USGS topographic maps on which urban or rural characteristics of the surrounding areas are depicted, as well as the location, if available, of documented historic properties.

### **Evaluation Criteria**

Impacts to historic and archaeological resources would be considered adverse (as defined in 36 CFR 800.9) if any site listed or eligible for listing on the NRHP would experience destruction of the site; alteration of site characteristics or setting; neglect resulting in deterioration or destruction; or transfer, lease, or sale of the property on which the site occurs if adequate restrictions or conditions are not included to ensure preservation of the property's significant historic features.

### **ENERGY**

The proposed project would allow NS to use shorter rail routes between destinations, increasing the efficiency of their systems. Shorter, more direct routes would reduce the overall fuel consumption of locomotives. The tonnage expected to operate over the connection was estimated assuming 5400 trailing tons per train. This was multiplied by the reduction in route length that would be realized from the connection to determine the reduction in ton miles. Multiplying ton miles by the fuel consumption per ton-mile provides the number of gallons of fuel saved. The proposed project would have an overall positive impact on energy use and encourage diversion of truck traffic to more fuel efficient rail transport.

### **Evaluation Criteria**

The following criteria was used to evaluate the potential impacts of the proposed project on energy resources:

- The effect of the proposed project on energy consumption.
- The effect of the proposed project on the transportation of energy resources and recyclable commodities.
- The effect of the proposed project on diversions of shipments from rail to trucks.

## **APPENDIX E**

### **REFERENCES**

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