soil would not be significant with the use of Best Management Practices to control runoff and surface instability.

Biological Resources: Willard Fueling Facility

During the site visit, SEA observed that the land use adjacent to the Willard Yard project area is comprised of agricultural, residential, and undeveloped land.

Existing Conditions - Vegetation. The proposed construction site at Willard Yard is located within an active rail yard. During the site visit, SEA determined that gravel covers the majority of the construction site, with a sparsely vegetated strip consisting of woody scrub-shrub vegetation and grasses present along the Conrail right-of-way, on either side of the existing railroad right-of-way. The vegetation currently existing within and outside the project area at Willard Yard is not unique or limited to the proposed construction site.

Potential Effects - Vegetation. SEA concluded that the proposed construction activity at Willard Yard would only affect commonly occurring vegetation. SEA also concluded that these plant species would re-vegetate any disturbed land adjacent to the newly constructed rail bed once the construction at Willard Yard is completed.

Existing Conditions - Wildlife. During the site visit, SEA determined that the right-of-way within and outside of Willard Yard provides habitat for a variety of terrestrial wildlife species. Based on the observations made in the field, SEA determined that the adjacent fields provide cover for small animals such as mice, moles, squirrels, rabbits, reptiles, and raptors. Various birds may also forage in these areas, including common songbirds and game species. SEA determined that the adjacent fields provide food and shelter for larger species such as deer, wild turkey, raccoon and opossum. SEA also determined that the small wetlands within the proposed construction area provide habitat for insects, amphibians, semi-aquatic reptiles, and waterfowl.

Potential Effects - Wildlife. SEA determined that the wildlife along the rail line at Willard Yard would be temporarily disturbed during construction activities. Temporary adverse impacts to wildlife populations inhabiting the watercourses crossed by the auxiliary tracks, as well as those in the associated small wetlands could also occur. SEA concluded that those potential wildlife population impacts would be minimal due to the small amount of wildlife habitat in the Willard Yard project area. In addition, the proposed project has minimal potential to affect movement or migration of wildlife.

Existing Conditions - Threatened or Endangered Species. Based on coordination with U.S. Fish and Wildlife Service's Reynoldsburg field office, SEA determined that there are two animal species in Seneca County, and one animal species in Huron County list as Federally threatened or endangered. They are listed in Table 5-OH-46. During the site visit, SEA evaluated the construction area for its potential to support these species and found that there is little potential

habitat, due to the existing railroad activity within proposed Willard Yard project area. During the site visit, SEA did not observe any of the listed species. Based on these findings, SEA determined that there is minimal potential for the presence of threatened endangered species on the Willard Yard site.

Potential Effects - Threatened or Endangered Species. Since there are no threatened or endangered species, or the habitat to support them, in or near the proposed Willard Yard construction site, SEA concluded that there would be no adverse impacts to any of these Federally protected species. SEA also concluded that the proposed action would not adversely affect any critical habitat for any listed species.

Existing Conditions - Parks, Forests, Preserves, Refuges, and Sanctuaries. SEA contacted representatives of the U.S. Fish and Wildlife Service, the National Park Service, and the U.S. Forest Service to identify lands within the jurisdiction of these Federal agencies. Based on this coordination, SEA determined that there are no state or Federal parks, forests, preserves, refuges, or sanctuaries located within or adjacent to the proposed Willard Yard construction site.

Potential Effects - Parks, Forests, Preserves, Refuges, and Sanctuaries. Since there are no parks, forests, preserves, refuges or sanctuaries are in or adjacent to the proposed Willard Yard construction site, SEA concluded that there would be no impacts to these types of resources.

Preliminary Recommended Mitigation: Willard Fueling Facility

Due to Best Management Practices used in the railroad's construction specifications and regulatory programs governing effects on wetlands, water resources, and protected species, it is SEA's preliminary determination that no mitigation is necessary. However, as a condition of approval, SEA would require CSX to conform to its standard specifications during construction. These standard specifications are presented in Chapter 3, Section 3.15, "Natural Resources."

Construction: Vermilion Connection (Erie County, OH) (NS)

The proposed action involves construction and operation of approximately 5,400 feet of new connecting track between NS and Conrail. Figure 5-OH-5, presented at the end of this state discussion, depicts the site and the surrounding conditions.

Water Resources: Vermilion Connection

Existing Conditions - Water Resources. Based on review of U.S. Geological Survey topographic mapping and observations made during the site visit, SEA determined that the closest surface water to the proposed Vermilion construction is Darby Creek, which is located approximately 2,500 feet west of the western terminus of the proposed project. Darby Creek has a riparian zone approximately 10-15 feet wide which contains low-growing shrubs, deciduous

trees and wetland plant species. SEA observed a small intermittent stream, containing wetland vegetation, located on the north side of the NS single track and draining toward Darby Creek.

Based on the review of National Wetland Inventory mapping and observations made during the site visit, SEA identified a palustrine scrub-shrub wetland located along Darby Creek and two additional wetland systems within the proposed Vermilion project area. SEA determined that the first wetland is a narrow system, located adjacent to the southern edge of the existing Norfolk Southern rail bed, which is a palustrine emergent wetland. The second wetland system observed by SEA is a narrow site, located adjacent to the eastern edge of Coen Road, and is a palustrine emergent wetland.

Based on review of Federal Emergency Management Agency Flood Insurance Rate Maps, SEA determined that the Vermilion site is not located within a 100-year floodplain. SEA confirmed the map findings during their site visit.

Potential Effects - Water Resources. The proposed construction at Vermilion would not cross any surface waters, therefore there would be no impact to those resources. SEA determined that Darby Creek, which is located approximately 2,500 feet west of the Vermilion proposed construction area, would not be affected by the proposed action. SEA also evaluated the potential impacts of soil erosion resulting from cleared vegetation and exposed soil. SEA concluded that the construction at Vermilion would not cause significant erosion since NS would implement Best Management Practices to control runoff and to stabilize the soil. In addition to implementing these Best Management Practices, NS would restore disturbed soil areas located outside the existing railroad bed through re-seeding of grass.

SEA concluded that the small wetlands identified would be affected by the proposed construction project. SEA determined that these potential impacts would be minimal, less than one third of an acre, and once construction is completed, the affected wetlands would re-establish themselves. However, NS may be required to obtain Section 404 authorization for discharge of fill material into "Waters of the U.S." A National Pollutant Discharge Elimination System stormwater discharge may be required if more than five of land would be disturbed during construction activities.

SEA concluded that the proposed construction at Vermilion would not adversely affect floodplains, since the proposed construction area is not located within the 100-year floodplain.

Biological Resources: Vermilion Connection

During the site visit, SEA observed that the land adjacent to the Vermilion construction site is comprised of agricultural land and existing railroad right-of-way.

Existing Conditions - Vegetation. The proposed Vermilion construction site encompasses approximately 12.4 acres. During the site visit, SEA observed that much of the area has been disturbed by rail activity and agriculture. SEA determined that crops are the primary vegetation at the Vermilion project location. SEA also observed areas of sparse vegetation, consisting of weedy annuals and various grasses. SEA determined that woody vegetation, consisting of low-growing shrubs and deciduous forest species, is limited to narrow strips between agricultural fields, a riparian area associated with Darby Creek, and sporadic areas adjacent to the Conrail double track and NS single track right-of-way. SEA also observed a woodland area of approximately five to ten acres, located approximately 300 feet west of the existing Coen Road at-grade crossing of the NS line. This woodland area consists of shrubs and deciduous trees, and abuts the existing NS rail lines on the north side.

Potential Effects - Vegetation. SEA concluded that because of the disturbed condition of the existing site, the proposed construction at Vermilion would affect only commonly occurring vegetation that is characteristic of such disturbed areas. Specifically, the construction activities would affect scattered grass and weedy species and cultivated vegetation within the proposed construction area. SEA concluded the there would be no adverse impacts to native plant communities.

After construction, NS would re-vegetate disturbed, nonagricultural areas outside the roadbed. NS would return agricultural areas at the Vermilion site to crop production. SEA determined that this type of vegetation is not unique or limited in the area.

Existing Conditions - Wildlife. During the site visit, SEA observed that the entire Vermilion project site and surrounding area is disturbed by either agricultural use or railroad activities. SEA determined that a riparian corridor is present along Darby Creek and may contain habitat for various species of fish, amphibians, reptiles, birds, and small mammals. SEA determined that additional wildlife habitat is present in the woodland area west of the existing Coen Road and NS line at-grade crossing. SEA determined that these forested areas could provide food and shelter for birds and small mammals, as well as food and shelter for larger species such as deer, wild turkey, raccoon, opossum and coyote.

Potential Effects - Wildlife. SEA concluded that the proposed construction at Vermilion would cause no adverse impacts to wildlife populations, due to the large amount of disturbed area within the proposed project area and the large amount of habitat surrounding the project area which will allow for wildlife relocations. In addition, SEA concluded that the proposed action has minimal potential to affect movement or migration of wildlife.

Existing Conditions - Threatened or Endangered Species. Based on coordination with representatives of the U.S. Fish and Wildlife Service and the Ohio Department of Natural Resources, SEA determined that there are three animal and one plant species Federally listed as threatened or endangered know to occur in Erie County. These species are listed in Tables 5-

OH-46 and 5-OH-47. During the site visit, SEA evaluated the Vermilion construction area for its potential to support these species and found that the woodland area located south of the proposed construction may contain habitat for the endangered Indiana bat.

Potential Effects - Threatened or Endangered Species. Based on coordination with the U.S. Fish and Wildlife Service, SEA concluded that the Vermilion construction project could affect the endangered Indiana bat which is known to occur in Erie County. SEA determined that the woodland area west of the Coen Road at-grade crossing, although not directly affected by construction of the proposed connection, may need to be surveyed prior to construction. SEA concluded that NS would need further discussion with the U.S. Fish and Wildlife Service and the Ohio Department of Natural Resources to determine if any field surveys are required.

Existing Conditions - Parks, Forest Preserves, Refuges and Sanctuaries. SEA contacted representatives of the U.S. Fish and Wildlife Service, the National Park Service and the U.S. Forest Service to identify land within the jurisdiction of these Federal agencies. Based on this coordination, SEA determined that there are no Federal or state parks, forests, refuges or sanctuaries in or adjacent to the proposed Vermilion construction site.

Potential Effects - Parks, Forest Preserves, Refuges and Sanctuaries. Since there are no parks, forests, preserves, refuges or sanctuaries in or adjacent to the proposed Vermilion site, SEA concluded that construction would not adversely affect these types of resources.

Preliminary Recommended Mitigation: Vermilion Connection

Due to Best Management Practices used in the railroad's construction specifications and regulatory programs governing effects on wetlands, water resources, and protected species, it is SEA's preliminary determination that no mitigation is necessary. However, as a condition of approval, SEA would require NS to conform to its standard specifications during construction. These standard specifications are presented in Chapter 3, Section 3.15, "Natural Resources." Once final designs have been determined, NS should coordinate with the U.S. Fish and Wildlife Service and the Ohio Department of Natural Resources to determine potential effects to any Federally listed threatened or endangered species. Before initiating any construction at the site, NS shall conduct a survey to determine the potential presence of the Indiana bat and bald eagle.

5-OH.16.2 Summary of Potential Effects and Preliminary Recommended Mitigation for Rail Line Abandonments

Abandonment: Toledo to Maumee (NS)

The proposed abandonment from Toledo to Maumee involves the abandonment of 7.5 miles of NS rail line. Figures 5-OH-8a through 8c, presented at the end of this state discussion, depict the Toledo to Maumee abandonment and the surrounding conditions.

Water Resources: Toledo to Maumee Abandonment

Existing Conditions - Water Resources. Based on the review of U.S. Geological Survey mapping and observations made during the site visit, SEA determined the proposed Toledo to Maumee abandonment segment crosses several streams. SEA identified the Ottawa River, Swan Creek, Delaware Creek, and three drainage ditches along the proposed abandonment. Based on review of National Wetland Inventory maps, SEA identified two wetland sites within the proposed abandonment area, one palustrine open water wetland on either side of the right-of-way. During the site visit, SEA identified eight additional wetlands. SEA described these wetlands as ranging from ponds with fringing wetland vegetation to riverine systems associated with the six streams.

Based on review of Federal Emergency Management Agency Flood Insurance Rate Maps, SEA determined that the proposed Toledo to Maumee abandonment site is not located within a 100-year floodplain.

Potential Effects - Water Resources. SEA concluded that salvage operations associated with the proposed Toledo to Maumee abandonment would have little affect on the water quality of the ten wetlands and six stream crossings found within the proposed abandonment area. However, proposed abandonment activities could disturb small areas of soil, thus increasing the potential for soil erosion and sedimentation into these local waterbodies and adjacent wetlands. Therefore, NS may be required to apply for authorization of Section 404 of the Clean Water Act, which permits discharge of fill material into waters of the United States. NS may be required to obtain a National Pollutant Discharge Elimination permit in accordance with Section 402 of the Clean Water Act.

Biological Resources: Toledo to Maumee Abandonment

During the site visit, SEA determined that light industry and commercial facilities comprise the well developed area surrounding the proposed Toledo to Maumee abandonment site.

Existing Conditions - Vegetation. SEA determined that the vegetation located along this segment includes species that are typically found in and among disturbed areas. SEA determined that gravel covers the majority of the right-of-way, with sparse weedy grass species. Outside of the railroad right-of-way, SEA primarily observed non-native grasses and deciduous and evergreen trees.

Potential Effect - Vegetation. SEA determined that the proposed abandonment of the Toledo to Maumee rail segment would affect common vegetation that is characteristic of disturbed areas. Specifically, the proposed abandonment activities would affect grass and scrub-shrub vegetation and some narrow strips of tree species which border the railroad right-of-way. In addition, SEA determined that NS may need to trim some trees located immediately adjacent to the railroad

right-of-way in order to safely operate salvage equipment. However, SEA concluded that the opportunistic plant species would re-vegetate these areas following completion of proposed abandonment activities on this rail line segment. In addition, NS would limit ground disturbance occurring during salvage operations to the existing right-of-way.

Following completion of the proposed abandonment activities, NS would discontinue all current maintenance operations that control vegetation along the existing right-of-way. This action would allow existing vegetation to naturally re-vegetate adjacent areas. Eventually, vegetation communities similar to those present in the existing right-of-way would return to the area.

Existing Conditions - Wildlife. During the site visit to the proposed Toledo to Maumee abandonment segment, SEA observed that the entire project site is comprised of residential, light industry, and railroad facilities. The wildlife habitat within the railroad right-of-way is limited to the sparse vegetation. SEA determined that wildlife found within the right-of-way is consistent with species adapted to disturbed areas. These species include songbirds and small mammals such as mice, moles, voles and rabbits. The vegetation system provides food and cover for small mammals and birds. SEA determined that, due to the large amount of development adjacent to the track to be abandoned, there is no habitat for larger wildlife species, such as deer, raccoon, gamebirds, and raptors.

Potential Effects - Wildlife. SEA determined that the proposed abandonment of the Toledo to Maumee rail segment would not adversely affect wildlife populations. Proposed abandonment activities would temporarily disturb wildlife along the abandonment site; however SEA concluded that the wildlife would re-inhabit the site when the proposed abandonment activities are completed. In addition, SEA concluded that the proposed activities would not adversely affect movement or migration of wildlife at the site or in the surrounding area.

Existing Conditions - Threatened or Endangered Species. Based on coordination with representatives of the U.S. Fish and Wildlife Service's Reynoldsburg field office, SEA determined that there are five animal and one plant Federally-listed threatened or endangered species listed within Lucas County. Tables 5-OH-46 and 5-OH-47 identify these species.

During the site visit to the Toledo to Maumee segment, SEA evaluated the habitat for its potential to support these threatened and endangered species and concluded that the area does not support habitat requirements for the listed species. In addition, during the site visit, SEA did not observe any of these species. Based on these findings, SEA determined that there is minimal potential for the presence of these Federally listed threatened or endangered species in the proposed Toledo to Maumee abandonment area.

Potential Effect - Threatened or Endangered Species. Since Federally-listed threatened and endangered species, or the habitat need to support them, are not located at or within the vicinity of the proposed project area, SEA determined that the proposed abandonment would not

adversely affect these species. SEA also concluded that the proposed abandonment of the Toledo to Maumee rail segment will not adversely affect any critical habitat for any Federally listed species. SEA also concluded that the proposed action would not adversely affect any critical habitat for any listed species.

Existing Conditions - Parks, Forests, Preserves, Refuges, and Sanctuaries. SEA contacted representatives of the USFWS, the National Park Service and the U.S. Forest Service to identify land within the jurisdiction of these Federal agencies. Based on this coordination, SEA determined that these are no Federal or state parks, forests, refuges or sanctuaries in or adjacent to the proposed Toledo to Maumee abandonment site.

Potential Effects - Parks, Forests, Preserves, Refuges, and Sanctuaries. Since there are no parks, forests, preserves, refuges or sanctuaries in or adjacent to the proposed Toledo to Maumee abandonment site, SEA concluded that abandonment would not adversely affect this type of resource.

Preliminary Recommended Mitigation: Toledo to Maumee Abandonment

Due to Best Management Practices used in the railroad's construction specifications and regulatory programs governing effects on wetlands, water resources, and protected species, it is SEA's preliminary determination that no mitigation is necessary. However, as a condition of approval, SEA would require NS to conform to its standard specifications during construction. These standard specifications are presented in Section 3.15, "Natural Resources."

Abandonment: Toledo Pivot Bridge (NS)

The proposed action involves abandonment of the 0.2-mile-long Toledo Pivot Bridge. Figure 5-OH-9, presented at the end of this section, depicts the site and the surrounding conditions.

Water Resources: Toledo Pivot Bridge Abandonment

Existing Conditions - Water Resources. As part of its analysis, SEA reviewed U.S. Geological Survey topographic maps and made observations during the site visit. The proposed abandonment segment at the Toledo Pivot Bridge crosses one stream, the Maumee River. SEA also reviewed U.S. Fish and Wildlife Service National Wetland Inventory mapping and determined there are no wetlands within the proposed abandonment area.

SEA also reviewed appropriate Federal Emergency Management Agency Flood Insurance Rate Maps and determined the that the proposed Toledo Pivot Bridge abandonment is located within the boundaries of the 100-year floodplain.

Potential Effects - Water Resources. SEA concluded that salvage operations associated with the removal of the Toledo Pivot Bridge would have little effect on the Maumee River. The Coast Guard regulates this activity under Section 9 of the River and Harbor Act. Proposed abandonment activities could disturb small areas of soil, thus increasing the potential for soil erosion and sedimentation into these local waterbodies and adjacent wetlands. Therefore, NS may be required to apply for authorization of Section 404 of the Clean Water Act, which permits discharge of fill material into waters of the U.S. Due to the limited amount of land disturbance that occurs during proposed abandonment activities, NS may not be required to obtain a National Pollutant discharge Elimination permit as required under Section 402 of the Clean water Act.

SEA determined that the proposed abandonment of the Toledo Pivot Bridge would not adversely affect the 100-year floodplain.

Biological Resources: Toledo Pivot Bridge Abandonment

SEA observed that the proposed Toledo Pivot Bridge abandonment segment is located within an area that is disturbed by industrial, commercial, and railroad development.

Existing Conditions - Vegetation. During the site visit, SEA determined that weedy annuals comprise the vegetation along the banks of the Maumee River at the Toledo Pivot Bridge, which includes weedy annuals and non-native grasses growing between medium-sized rocks used for erosion control. SEA also observed patches of weedy annuals, non-native grasses, exposed soil, and gravel on land adjacent to the right-of-way beyond the bridge abutments. Additionally, SEA also determined that a small band of deciduous forest with scrub brush borders the right-of-way to the north, while weedy annuals and non-native grasses are located on the south side of the tracks.

Potential Effects - Vegetation. SEA determined that the proposed abandonment of the Toledo Pivot Bridge rail segment would affect common vegetation that is characteristic of disturbed areas. Specifically, the proposed abandonment activities would affect grass and scrub-shrub vegetation and some narrow strips of tree species which border the railroad right-of-way. In addition, SEA determined that NS may need to trim some trees located immediately adjacent to the railroad right-of-way in order to safely operate salvage equipment. However, SEA concluded that the opportunistic plant species would re-vegetate these areas following completion of proposed abandonment activities on this rail line segment. In addition, NS would limit ground disturbance occurring during salvage operations to the existing right-of-way.

Following completion of the proposed Toledo Pivot Bridge abandonment activities, NS would discontinue all current maintenance operations that control vegetation along the existing right-of-way. This action would allow existing vegetation to naturally re-vegetate adjacent areas. Eventually, vegetation communities similar to those present in the existing right-of-way would return to the area.

Existing Conditions - Wildlife. SEA determined that the right-of-way of the Toledo Pivot Bridge approaches and abutments provides limited cover and food for terrestrial wildlife. SEA also determined that adjacent scrub-scrub and weedy annuals provide cover for small mammals such as mice, moles, voles and rabbits. Additionally, SEA determined that small timbered areas to the north provide food and shelter for squirrels, opossums, songbirds, and raptors. SEA determined that the Toledo Pivot Bridge structure provides some nesting habitat for some bird species.

SEA observed that the Maumee River appears to have been affected by the surrounding industrial development activities. SEA determined that the Maumee River provides a freshwater aquatic habitat for a variety of species including waterfowl, shorebirds, gulls, fish, and turtles.

Potential Effects - Wildlife. SEA determined that there would be no impact on terrestrial wildlife on the banks of the Maumee River due to the proposed Toledo Pivot Bridge abandonment activities. Increased human activity and noise from equipment may temporarily disturb wildlife during removal activities. However, the disturbance would end once NS completes operations, and the area would revert to an environment similar to that before operations started. Temporarily disturbed wildlife will soon re-inhabit the site once the proposed abandonment process is completed.

Salvage operations would eliminate cover for a variety of bird species that roost or nest within the Toledo Pivot Bridge structure. SEA concluded that this proposed action would not adversely affect bird populations because these birds are typically well adapted to urbanized environments and some, such as rock doves and starlings, are introduced species considered nuisances by Federal and state fish and game agencies. SEA concluded that potential impacts to these species would not be significant. SEA also concluded that the proposed action has minimal potential to affect movement or migration of wildlife.

SEA determined that removal operations at the Toledo Pivot Bridge would temporarily increase soil erosion and turbidity in the Maumee River. Because NS will follow permit requirements, sediment control measures, and other recommended mitigation procedures, SEA concluded that there would be no adverse impacts to fish populations and habitat.

Existing Conditions - Threatened and Endangered Species. Based on coordination with representatives of U.S. Fish and Wildlife Service's Reynoldsburg field office, SEA determined that there are five animal and one plant Federally-listed threatened or endangered species listed within Lucas County. Tables 5-OH-46 and 5-OH-47 identify these species.

During the site visit to the proposed Toledo Pivot Bridge abandonment site, SEA evaluated the habitat for its potential to support these listed threatened and endangered species and determined that the project area and surrounding areas do not support habitat requirements for the Federally-listed species. In addition, during the site visit, SEA did not observe any listed

species. Based on these findings, SEA determined that there is minimal potential for the presence of these Federally-listed threatened or endangered species in the proposed Toledo Pivot Bridge abandonment site.

Potential Effects - Threatened and Endangered Species. Since Federally-listed threatened or endangered species, or the habitat needed to support them, are not located on or within the vicinity of the proposed abandonment of the Toledo Pivot Bridge, SEA determined that there would be no impact to these species. SEA also determined that the proposed action would not affect any critical habitat for any listed species.

Existing Conditions - Parks, Forests, Preserves, Refuges and Sanctuaries. SEA contacted representatives of the U.S. Fish and Wildlife Service, the National Park Service and the U.S. Forest Service to identify land within the jurisdiction of these Federal agencies. Based on this coordination, SEA determined that these are no Federal or state parks, forests, refuges or sanctuaries in or adjacent to the proposed Toledo Pivot Bridge abandonment site.

Potential Effects - Parks, Forests, Preserves, Refuges and Sanctuaries. Based on coordination with the appropriate regulatory agencies, SEA determined that there would be impacts to no Federal or state parks, forests, refuges or sanctuaries in or adjacent to the proposed Toledo Pivot Bridge abandonment site.

Preliminary Recommended Mitigation: Toledo Pivot Bridge

Due to Best Management Practices used in the railroad's construction specifications and regulatory programs governing effects on wetlands, water resources, and protected species, it is SEA's preliminary determination that no mitigation is necessary. However, as a condition of approval, SEA would require NS to conform to its standard specifications during construction. These standard specifications are presented in Chapter 3, Section 3.15, "Natural Resources."

5-OH.17 OHIO LAND USE/SOCIOECONOMICS

For the land use/socioeconomics analysis, SEA evaluated potential changes in the physical environment related to the proposed Conrail Acquisition. The issues included consistency with current land use plans and existing Coastal Zone Management plans, potential effects on prime farmland, and suitability of abandoned rights-of-way for alternative public uses. According to the Bureau of Indian Affairs, there are no Federally recognized Native American tribes or reservations in Ohio. All other land use impact analyses are discussed below by site.

5-OH.17.1 Summary of Potential Effects and Preliminary Recommended Mitigation for New Constructions

Construction: Vermilion Connection (Erie County, OH) (NS)

The proposed activity at the Vermilion site is the construction and operation of a new rail line connection between the existing Conrail and NS tracks.

The proposed Vermilion construction site is bordered on the north by the Conrail double track line and on the east by unincorporated portions of Erie County near the City of Vermilion. The south side is the NS single track line, and the west side is Risden Road. The proposed construction area is primarily agricultural. Land uses directly adjacent to the proposed site include rail and highway uses, utility rights-of-way and residences.

The proposed connection would result in the conversion of 12.4 acres of cropland to rail right-of-way and the construction of an at-grade crossing of Coen Road. (As part of its mitigation to reduce rail operation impacts in the western suburbs of Cleveland, NS is proposing a double crossover connection at Vermilion. This mitigation would use approximately twice the land of the connection described above. See the separate discussion of Cleveland west suburbs at the end of this Section.)

Land Use Plan/Zoning. The area of the proposed construction is currently zoned light industrial.

Consistency with Local Land Use Plan. According to the Erie County Department of Planning and Development, the proposed construction is consistent with the long-term and short-term planning documents.

Prime Farmland. NRCS has not classified the soils at the site as prime farmland.

Coastal Zone. According to the Ohio Coastal Management Program and the Erie County Department of Planning and Development, the proposed activity is not within a designated coastal zone. A coastal zone is located adjacent to the site on the north side of the existing Conrail rail lines. This coastal zone extends north to Lake Erie.

Based on the findings described above, it is SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed Acquisition at the Vermilion site.

Because there are no significant impacts, SEA does not recommend mitigation.

Construction: Columbus Connection (Franklin County, OH) (NS)

The proposed activity at the Columbus site is the construction and operation of a new rail line connection between the existing NS and Conrail tracks.

The proposed Columbus construction site consists entirely of existing railroad right-of-way located between two existing rail lines in a developed urban corridor. Land uses surrounding the proposed site include residential and industrial. Glen Echo ravine extends eastward through the neighborhood to the rail line and includes a neighborhood park.

Land Use Plan/Zoning. Rail and other transportation and utility uses dominate the area around the proposed construction site. The zoning in this area includes manufacturing uses east of the existing rail line and single-family residential uses along the west side of the rail line.

Consistency with Local Land Use Plan. According to the City of Columbus Department of Trade and Development, the proposed construction is recognized in and consistent with the Columbus Comprehensive Plan.

Prime Farmland. NRCS has not classified any soils at the site as prime farmland.

Coastal Zone. The area of the proposed activity is not within a designated coastal zone.

Based on the findings described above, it is SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed Acquisition at the Columbus site. Because there are no significant impacts, SEA does not recommend mitigation.

Construction: Collinwood New Intermodal Facility (Cuyahoga County, OH) (CSX)

The proposed action at the Collinwood Yard site is the construction of a new intermodal facility to replace the intermodal facility across East 152nd Street at that location. The original intermodal facility would continue to be used as a storage site.

The proposed Collinwood Yard construction lies within the City of Cleveland. Several large brick buildings are located in the northwestern portion of the site. The northern portion of the site is immediately abutted by Interstate 90. A sound barrier abuts Interstate 90 north of the site and separates the site from residential dwellings. Land uses immediately south of the eastern portion of the yard are commercial and light industrial. Euclid Creek, a tributary that discharges to Lake Erie, bounds the Collinwood Yard on the east.

The proposed expansion would require acquisition of approximately 23 acres of property previously used by the New York Central Railroad as a major rail yard and maintenance facility.

The demolition of a structures located on the property would be required. Most of the construction would take place adjacent to the existing Conrail yard.

Land Use Plan/Zoning. The land is zoned for industrial uses and proposed for industrial uses on the future City of Cleveland land use map.

Consistency with Local Land Use Plan. According to the City of Cleveland Planning Commission, the proposed construction is consistent with the future land use map.

Prime Farmland. According to the Soil Survey of Cuyahoga County, NRCS has not classified soils located in the vicinity of the proposed construction site as prime farmland. According to the City of Cleveland Planning Commission, the land has not been in cultivation for at least 100 years and has been industrial for decades.

Coastal Zone. According to the Ohio Coastal Management Program and the City of Cleveland Planning Commission, the proposed activity is not located within a designated coastal area of Lake Erie, or any other coastal zone.

Based on the findings described above, it is SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed Acquisition at the Collinwood Yard site. Because there are no significant impacts, SEA does not recommend mitigation.

Construction: Willard Yard Fueling Facility (Huron County, OH) (CSX)

The proposed action at the Willard Yard site is the construction of a fuel facility along the tracks located to the west of Willard Yard.

The site of the proposed Willard Yard connection would be primarily on railroad rights-of-way, with the exception of approximately ten acres of land which CSX would acquire along a narrow corridor adjacent to the existing rail lines. Land uses along the proposed four mile rail corridor consist primarily of agricultural lands.

Construction would consist of a roadway along an existing rail line, and the width of additional right-of-way acquisitions would typically be limited to 25 feet. After construction is complete, it is anticipated that adjacent land will remain in its present use.

Consistency with Local Land Use Plan. Based on the available information, the proposed activity would be consistent with land use in the corridor.

Prime Farmland. According to the Huron and Seneca County Soil Surveys, NRCS has classified soils along the proposed action corridor as prime farmland. Prime farmland soil will be impacted along the four mile long proposed construction area. It is anticipated that up to a

total of approximately ten acres of prime farmland will be converted to railroad use, but average width is anticipated to be only 25 feet. SEA has determined that the small loss of prime farmland from this construction would not result in a significant effect to the availability of the resource in the two counties given the total amount of prime farmland in both counties.

Coastal Zone. The area of the proposed activity is not within a designated coastal zone.

Based on the findings described above, it is SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed Acquisition at the Willard Yard site. Because there are no significant impacts, SEA does not recommend mitigation.

Construction: Oak Harbor Connection(Ottawa County, OH) (NS)

The proposed activity at the Oak Harbor site is the construction and operation of a new rail line connection between the existing NS and Conrail tracks.

The proposed construction occurs within an area dominated by agriculture. Rail, roads and highways, utility uses, and residential properties, including farmhouses, also surround the proposed new construction site.

The proposed activity would result in the conversion of a maximum of 11.5 acres of land to railroad right-of-way. All of this land would be prime farmland, most of which is cultivated.

Land Use Plan/Zoning. The site is located outside the city limits of Oak Harbor and is zoned for agricultural uses.

Consistency with Local Land Use Plan. According to the Ottawa Regional Planning Commission, the proposed construction would be consistent with the land use plan.

Prime Farmland. NRCS has classified soils in the area of the proposed construction as prime farmland. Prime farmland is abundant in the county. According to the Ottawa Regional Planning Commission, the small loss of prime farmland from this construction would not result in a significant effect to the availability of the resource.

Coastal Zone. The area of the proposed activity is not within a designated coastal zone.

Based on the findings described above, it is SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed Acquisition at the Oak Harbor site Because there are no significant impacts, SEA does not recommend mitigation.

5-OH.17.2 Summary of Potential Effects and Preliminary Recommended Mitigation of Rail Line Abandonments

Abandonment: Lucas County, Ohio-Toledo-Maumee (NS)

The proposed activity at the Lucas County site is the abandonment of approximately 7.5 miles of existing NS rail line between Toledo and Maumee.

Land uses along the 7.5-mile rail line segment between Toledo and Maumee are predominantly residential and commercial, with some industry present. An estimated 91 acres of land would be affected by this proposed abandonment. Removal activities would not disturb adjacent land uses.

Land Use Plan/Zoning. Most of the proposed abandonment is within or adjacent to land that is zoned and developed for residential uses.

Consistency with Local Land Use Plan. The City of Toledo has funded, but not completed, a comprehensive plan. The Toledo-Lucas County Plan Commissions consider the proposed abandonment an opportunity for creation of a public recreation space.

Prime Farmland. Because the line transverses an urban area, there would be no effect on prime agricultural lands.

Coastal Zone. The area of the proposed activity is not within a designated coastal zone.

Alternative Uses. In September 1997, The City of Toledo Rails to Trails Team appointed by the Mayor of Toledo unanimously supported alternative public use of the proposed abandonment. The Team represents the city governments, the Regional Bikeway Committee, the Toledo Area Metroparks, the Northwestern Ohio Rails to Trails Association, and the Toledo Metropolitan Area Council of Governments. According to the Toledo-Lucas County Plan Commissions, this route has the potential to serve as a greenway spine or trail that facilitates connecting a variety of recreational and institutional elements that people may eventually use as an alternative transportation system.

According to the information provided in the Environmental Report by the Applicants, NS does not have fee title to all of the right-of-way underlying the proposed abandonment. As such, upon abandonment, there would not be a contiguous corridor available for future public use. Unless an agreement to preserve the right-of-way for public use is completed prior to abandonment, the lack of contiguous fee title, together with considerations related to location, physical and adjacent conditions, may make public uses of the right-of-way of the line proposed for abandonment more difficult.

Job Losses. This line currently runs approximately two trains per day. Approximately 90 carloads per year from the line's sole shipper, A&K Rail Materials, would be diverted to truck. Based on the availability of alternative transportation, it is SEA's preliminary conclusion that there would be no direct job losses related to changes in the physical environment as a result of this proposed abandonment.

Based on the findings described above, it is SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed abandonment at the Toledo to Maumee site. Because there are no significant impacts, SEA does not recommend mitigation.

Abandonment: Lucas County, Ohio-Toledo Pivot Bridge (NS)

The proposed activity at the Pivot Bridge site is the abandonment of the 0.2-mile long NS rail bridge.

The land use adjacent to the pivot bridge includes the Maumee River and heavy industrial uses. Cargo ships and tug and recreational boats use the Maumee River.

The proposed abandonment would involve removal of the bridge structure and abutments. Removal activities would not significantly impact adjacent land uses, although the removal of the bridge could require the use of rubber-tired construction equipment, cranes, barges, and other heavy construction equipment outside of the rail line right-of-way on property around bridge approaches and abutments. Any adjacent land that would be disturbed by removal activities would be restored by NS. Removal of the bridge abutments and other support structures could temporarily disturb sediment deposits on the river bottom, as well as dislodge debris that may have collected around the abutments and structures. NS would clear all debris surrounding the site.

River traffic could potentially be delayed for short periods of time during removal operations. The removal of the bridge, which would be done in accordance with U.S. Coast Guard regulations, would have beneficial effects for navigation of the river due to elimination of delays during bridge operation and the obstacle that the bridge presents.

Land Use Plan/Zoning. There is no zoning for the area of the Pivot Bridge.

Consistency with Local Land Use Plan. Although the proposed abandonment is not inconsistent with the local land uses, the Toledo-Lucas County Plan Commission has asked that the bridge crossing be retained for alternative uses.

Prime Farmland. There is no prime farmland in the area below the Pivot Bridge.

Coastal Zone. The area of the proposed activity is not located within a designated coastal zone.

Alternative Uses. The Pivot Bridge is one of three rail crossings of the Maumee River in the Toledo area that serve north-south rail traffic. The Toledo-Lucas County Plan Commissions have asked that the bridge crossing be retained to provide an alternative rail crossing should one or more of the other bridge crossings be out of service.

Job Losses. Currently, approximately 11 trains per day operate over the bridge. Traffic over the bridge would be rerouted to the Conrail bridge approximately four miles south, and no shippers would be affected. There would be no direct job losses related to changes in the physical environment as a result of this proposed abandonment.

Based on the findings described above, it is SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed Acquisition at the Pivot Bridge site. Because there are no significant impacts, SEA does not recommend mitigation.

5-OH.18 OHIO ENVIRONMENTAL JUSTICE

As part of its analysis, SEA examined activities associated with the proposed Conrail Acquisition for environmental justice impacts (disproportionately high and adverse impacts to minority and low-income populations) in accordance with Executive Order 12898. As described in the Environmental Justice Methodology in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," SEA first categorized the nature of the populations in areas where Acquisition-related activities are proposed. SEA determined whether the population in such areas met the following environmental justice thresholds: (1) greater than 50 percent of the population is minority or low-income, or (2) the minority or low-income population percentage is 10 percent greater than the minority or low-income population percentage in the county.

Next, SEA ascertained whether this population fell within an area of potential effect. SEA defined a typical zone on either side of a rail line segment or proposed construction site, or bordering a railroad intermodal facility or rail yard, as an area of potential effect. In general, the extent of an area of potential effect may vary depending on the nature of the changes in rail activity associated with it, but such areas typically extend 400 to 1500 feet out from the rail line segment or facility being analyzed.

SEA then evaluated these areas of potential effect for proposed Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis. In this analysis, SEA evaluated potential impacts on safety, transportation, air quality, noise, cultural resources, hazardous waste sites, hazardous materials transport, natural resources, and land use/socioeconomic effects. SEA also visited the sites of proposed construction for new rail line connections, rail line segments, intermodal facilities, and rail yards.

SEA developed and executed expanded public outreach efforts for those jurisdictions that met both SEA's thresholds for environmental justice and the Board's thresholds for environmental

significance. SEA designed the public outreach process to seek widespread notice and dissemination of SEA's environmental impact analysis; provide additional opportunities for community input to the NEPA process; solicit information about cumulative effects in minority and low-income communities; and allow minority and low-income communities to assist in fashioning appropriate alternatives and mitigation measures. SEA is placing additional copies of the Draft EIS in jurisdictions with high proportions of minority and low-income populations that do not have significant environmental impacts which could result from the proposed Acquisition.

This section presents the results of those evaluations and analysis. A complete list of all the sites analyzed for environmental justice impacts is presented in Appendix K.

5-OH.18.1 Ohio Environmental Justice Settings

Proposed new constructions and rail yards with proposed changes in activity in Ohio did not meet either the minority or low-income population thresholds for further environmental justice analysis.

Intermodal Facilities

One intermodal facility in Ohio with proposed increases in truck traffic would exceed the Board's thresholds for environmental analysis. Table 5-OH-48 presents the existing minority and low-income composition of the area of potential effect surrounding the Discovery Park intermodal facility in Columbus, Ohio, and associated truck routes that meet the environmental justice population thresholds.

Table 5-OH-48
Ohio Environmental Justice Site Summary for Intermodal Facilities and Truck Routes

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Franklin County	961,437	19.1%	13.0%	NA	
Discovery Park (NM-12)	3,095	76.2%	8.6%	Yes	No
Discovery Park Truck Routes (NM-12)	15153	39.7%	10.0%	Yes	No

Rail Line Segments

The following table presents the existing minority and low-income composition of the area of potential effect surrounding the nine rail line segments in Ohio with proposed changes that meet the environmental justice population thresholds.

Table 5-OH-49
Ohio Environmental Justice Summary for Rail Line Segments

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low Income Population
Cuyahoga County	1,412,140	28.4%	13.8%	NA	
Cleveland - Shortline Jct. (N-074)	4,413	21.8%	28.9%	No	Yes
White - Cleveland (N-081)	15,672	63.7%	44.4%	Yes	Yes
Mayfield - Marcy (C-072)	12,858	67.3%	42.2%	Yes	Yes
Quaker - Mayfield (C-073)	25,024	83.1%	29.7%	Yes	Yes
Ashtabula, Cuyahoga, Lake Counties	1,727,460	23.9%	12.8%	NA	
Cleveland - Ashtabula (N-075)	71,286	47.6%	22.4%	Yes	No
Ashtabula, Mahoning, Trumbull Counties	592,440	11.8%	14.2%	NA	
Youngstown - Ashtabula (N-082)	2,665	25.2%	26.3%	Yes	Yes
Erie, Huron Counties	133,019	7.3%	9.2%	NA	
Bellevue - Sandusky Docks (N-085)	1,372	14.4%	22.3%	No	Yes
Lucas County	462,361	19.4%	15.3%	NA	
Miami - Airline (N-086)	1,931	44.2%	39.3%	Yes	Yes
Hardin, Marion Counties	95,385	4.4%	13.9%	NA	
Marion - Ridgeway (C-071)	1,075	5.3%	2.42%	No	Yes

5-OH.18.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Table 5-OH-50 summarizes the sites and rail line segments that met either the minority or low-income population thresholds, and for which, based on currently available information and after reviewing the findings of each of the resource analyses (noise, air quality, transportation, etc.), SEA identified significant potential environmental effects. Sites and rail line segments that did not meet both of these criteria are not discussed further in this section. Public Outreach efforts are described below for those sites or rail line segments for which significance thresholds have been exceeded. Mitigation strategies for Ohio are described at the end of this section.

Table 5-OH-50
Ohio Environmental Justice Impacts Summary

Location (Area of Potential Effect)	Resource Impacts							
	Noise	Air Quality	Hazardous Materials Transport	Hazardous Materials Sites	Natural Resources	Transportation / Safety	Land Use	Cultural Resources
Rail Line Segments								
Cleveland - Shortline Jct. (N-074)	Y [a]	NA	N	N	NA	N	NA	NA
White - Cleveland (N-081)	Y [a]	NA	Y	N	NA	N	NA	NA
Mayfield - Marcy (C-072)	Y	NA	Y	N	NA	N	NA	NA
Quaker - Mayfield (C-073)	Y	NA	Y	N	NA	N	NA	NA
Cleveland-Ashtabula (N-075)	Y [a]	NA	Y	N	NA	N	NA	NA
Youngstown - Ashtabula (N-082)	Y [a]	NA	Y	N	NA	Y	NA	NA
Bellevue - Sandusky Docks (N-085)	Y [a]	NA	N	N	NA	N	NA	NA
Marion - Ridgeway (C-071)	Y [a]	NA	N	N	NA	Y	NA	NA

Table 5-OH-50
Ohio Environmental Justice Impacts Summary

Location (Area of Potential Effect)	Resource Impacts							
	Noise	Air Quality	Hazardous Materials Transport	Hazardous Materials Sites	Natural Resources	Transportation / Safety	Land Use	Cultural Resources
Miami - Airline (N-086)	N	NA	N	N	NA	Y	NA	NA

Y*= Impact that does not meet Board thresholds for Significance
Y = Impact that meets Board thresholds for Significance
N = No impact
NA = Not applicable/No Environmental Analysis according to Scope

Impact Analysis - Rail Line Segments

Five of the rail line segments with potential environmental justice impacts are located in the City of Cleveland. Two of the five rail line segments also affect the City of East Cleveland. Each of these rail line segments is discussed below. A further discussion of the concerns and issues raised by the City of Cleveland are presented in the special section at the end of the Ohio section.

Cleveland - Shortline Junction. Based on currently available information, SEA has identified potential noise effects along this NS rail line segment, which begins at the Cloggsville Junction near West 25th Street and runs southwest through Linndale to Short, just north of Brook Park.

There are 21 noise receptors that could be affected by the proposed increase from 2.0 to 4.2 trains per day on this rail line segment. Populations along this rail line segment in Cleveland exceed the environmental justice threshold for low-income. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted in these areas by noise.

White - Cleveland. Based on currently available information, SEA has identified potential noise effects along this NS rail line segment. This rail line segment begins near Cleveland's downtown and runs southeast through East-Central Cleveland, parallel to 93rd Street and Broadway, southeast of Harvard Avenue. There are 30 noise receptors that could be affected by the proposed increase in train traffic of 17.2 trains per day on this rail line segment. Populations along this particular rail line segment in Cleveland exceed the environmental justice thresholds for minority and low-income populations. The potentially affected population along this rail line segment is predominately African-American. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted in these areas by noise.

Based on currently available information, SEA has also identified this NS rail line segment as resulting in a potentially significant hazardous materials transportation effect because the proposed increase in hazardous materials carried over this rail line segment would increase to over 10,000 car loads per year. The proposed increase, from 12,000 to 34,000 car loads yearly, would require this NS rail line segment to be designated as a hazardous materials transport "major key route", thus further requiring special safety and mitigation measures, including assistance to communities by NS in formulating emergency response plans. (See discussion on hazardous materials transport mitigation in the "Safety: Rail Transport of Hazardous Materials" section of this Draft EIS.)

Mayfield - Marcy. Based on currently available information, SEA has identified substantial potential noise impacts that meet the Board's threshold for mitigation along this CSX rail line segment, which runs south through the east side of Cleveland, beginning near Mayfield Road in Little Italy and continuing to the Marcy Rail Yard in Cuyahoga Heights. Approximately 219 noise receptors could be affected by the proposed increase of 40.4 trains per day on this rail line segment. SEA has also identified this rail line segment as resulting in a potentially significant hazardous materials transportation effect because the increase in hazardous materials carried over this rail line segment would double and increase to over 20,000 car loads per year. The proposed increase, from 0 to 44,000 car loads yearly, would require this CSX rail line segment to be designated as a hazardous materials "major key route", thus further requiring special safety and mitigation measures, including assistance to communities from CSX in formulating emergency response plans. Population groups along this particular rail line segment in Cleveland exceed the environmental justice thresholds for minority and low-income populations. The population along this rail line segment is predominately African-American. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted in these areas by noise.

Quaker - Mayfield. Based on currently available information, SEA has identified substantial potential noise impacts that meet the Board's threshold for mitigation along this CSX rail line segment, which runs south from Coit Road in the Collinwood area through the west side of the City of East Cleveland to Mayfield Road near Little Italy on the east side of Cleveland. Approximately 254 noise receptors could be affected by the proposed increase of 37.0 trains per day on this rail line segment. SEA has also identified this rail line segment as resulting in a potentially significant hazardous materials transportation effect because the increase in hazardous materials carried over this rail line segment would double and increase to over 20,000 car loads per year. The proposed increase, from 0 to 44,000 car loads yearly, would require this CSX rail line segment to be designated as a hazardous materials "major key route", thus requiring the installation of special safety measures, including assistance from CSX in formulating emergency response plans. Populations along this particular rail line segment in Cleveland exceed the environmental justice threshold for minority and low-income. The communities along this rail line segment are predominately African-American. In accordance with the Executive Order on

Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted in these areas by noise.

Cleveland - Ashtabula. Based on currently available information, SEA has identified potential noise effects along this NS rail line segment that connects Ashtabula in northeast Ohio with Cleveland. There are 1,009 noise receptors that could be affected by the proposed increase from 13 to 36.6 trains per day on this rail line segment. SEA has also identified this rail line segment as resulting in a potentially significant hazardous materials transportation effect because the increase in hazardous materials carried over this rail line segment would double and increase to over 20,000 car loads per year. The proposed increase, from 7,000 to 37,000 car loads yearly, would require this NS rail line segment to be designated as a hazardous materials "major key route", thus requiring the installation of special safeguards along the affected line and assistance to communities from NS in formulating emergency response plans. Populations along this particular rail line segment exceed the environmental justice threshold for minority population and low-income. SEA's preliminary findings indicate that the potentially affected environmental justice population is concentrated in the Cleveland and East Cleveland communities. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted in these areas by noise.

Mitigation for Cleveland Area. SEA is currently developing mitigation strategies in coordination with the City of Cleveland and the City of East Cleveland, which are discussed in the Public Outreach section below. As SEA continues to perform public outreach and additional site-specific noise analysis, SEA will determine the extent and nature of the potential environmental justice impacts. If an environmental justice impact exists, SEA will determine if mitigation would be practicable. This coordination with the local community as part of the on-going community outreach process will be reported in the Final EIS. Further details regarding potential mitigation measures are provided in the special section on Cleveland at the end of the Ohio section.

Public Outreach for Cleveland Area

SEA identified low-income, African-American populations in the neighborhoods on the east side of Cleveland and the City of East Cleveland where the following rail line segments exist: White-Cleveland (N-81), Mayfield-Marcy (C-072), Quaker-Mayfield (C-073), and Cleveland-Ashtabula (N-075). SEA also identified a low-income population along the Cleveland-Shortline Junction (N-074) rail line segment. SEA is coordinating outreach efforts with the cities of Cleveland and East Cleveland to notify potentially affected populations of the possible effects of the proposed Acquisition and to seek input and participation in the decision making process.

SEA is also sending fact sheets describing the proposed acquisition and the environmental review process to neighborhood, business, and other local organizations. SEA will also send fact

sheets and notification of Draft EIS availability to members of a railroad acquisition Task Force organized by the City of Cleveland and community leaders in the City of East Cleveland.

Other rail line segments in Ohio with potential significant environmental justice impacts are discussed below. A detailed discussion of public outreach efforts is presented in the special section on Cleveland at the end of the Ohio section.

Youngstown - Ashtabula. Based on currently available information, SEA has identified potential noise effects along this NS rail line segment that runs north from Youngstown to Ashtabula in eastern Ohio. There are 84 noise receptors that could be affected by the proposed increase from 11.7 to 23.8 trains per day on this rail line segment. Based on currently available information, SEA has also identified this rail line segment as resulting in a potentially significant hazardous materials transportation effect because the increase in hazardous materials carried over this rail line segment would increase to over 10,000 car loads per year. The proposed increase, from 2,000 to 11,000 car loads yearly, would require this NS rail line segment to be designated as a hazardous materials "key route", thus requiring the installation of special safeguards. NS would also need to assist local communities in formulating emergency response plans for hazardous materials spills. SEA has also identified two potential highway/rail at-grade crossing safety impacts at Bradley-Brownlee Road and Warren Sharon Road, in Trumbull County, Ohio. These crossings are in rural locations several miles north of Youngstown and are not expected to be near environmental justice populations. However, the potential impact is located several miles away from the identified environmental justice population.

Populations along this particular rail line segment exceed the environmental justice thresholds for minority and low-income populations. The minority population along this rail line segment is predominity African-American and Hispanic. Based on the potential environmental effects identified and the characteristics of the population affected, the proposed increase in activity along this rail line segment may result in a potential environmental justice impact with respect to noise and hazardous materials transport. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted in these areas by noise.

Public Outreach

SEA identified Ashtabula and Youngstown, along this rail line segment, as having minority and/or low-income populations potentially affected by the proposed acquisition. SEA is conducting outreach to notify the affected population of the area.

SEA will send a copy of the Draft EIS to the Ashtabula and Youngstown public libraries to ensure that all members of the communities have access to the Draft EIS. SEA will submit notices to the daily and weekly newspapers serving Ashtabula and Youngstown announcing the availability and location of the Draft EIS and will also submit public service announcements to

radio stations in each city, announcing the Draft EIS release and procedures for public review and comment.

SEA will send fact sheets to local community organizations, as identified in impacted areas, and will also send fact sheets and notifications of Draft EIS availability to the mayors and members of the city councils of Ashtabula and Youngstown to facilitate comment.

Bellevue - Sandusky Docks. Based on currently available information, SEA has identified noise effects along this NS rail line segment, that runs from the City of Bellevue north to Sandusky on Lake Erie. There are 44 noise receptors that could be affected by the proposed increase from 1.4 to 11.7 trains per day on this rail line segment.

Populations along this particular rail line segment exceed the low-income environmental justice threshold. Based on the potential environmental effects identified and the characteristics of the population affected, the proposed increase in activity along this rail line segment may result in a potential environmental justice effect. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted by noise.

Marion - Ridgeway. Based on currently available information, SEA has identified potential noise effects along this CSX rail line segment, that begins at a junction near west Marion, continues west through the towns of New Bloomington, La Rue, Mount Victory, and connects to a four-way junction near Ridgeway. There are 216 noise receptors that could be affected by the proposed increase from 16.1 to 31.8 trains per day on this rail line segment. SEA's preliminary identification includes a potentially significant highway/rail at-grade crossing safety impact at Section Street. However, the potential impact is located approximately 12 miles east of the identified environmental justice population located predominately in Marion City. Based on currently available information, SEA's preliminary conclusion is that given the distance between the potentially at risk population and the impact site, there would be no environmental justice impacts associated with the highway/rail at-grade crossing safety impact.

Populations along this particular rail line segment exceed the low-income environmental justice threshold. The primary population affected by additional train traffic on this rail line segment would be located in the City of Marion. Based on the potential environmental effects identified and the characteristics of the population affected, the proposed increase in activity along this rail line segment may result in a potential noise effect. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted by noise.

Miami - Airline. Based on currently available information, SEA identified this two-mile, NS rail line segment in the city of Toledo, Ohio, as meeting the thresholds for freight safety because

the interval between potential train accidents per mile is less than years 100 years (88-year interval).

Populations along this particular rail line segment exceed the environmental justice threshold for minority and low-income. The communities along this rail line segment are predominately Hispanic with a small number of African-Americans.

Public Outreach

SEA has identified minority and/or low income populations in the City of Toledo, Ohio, that may be affected by the proposed acquisition. The identified area is located in the central part of the city. A variety of outlets are being used to announce and to engage potentially affected populations in the decision making process. SEA identified a predominately Hispanic population and is translating the summary of the Draft EIS and the factsheet into Spanish to accommodate the needs of the local community. SEA is notifying the community through media outlets, local organizations, libraries and elected officials.

SEA is sending copies of the Draft EIS to local libraries in the Toledo area that serve the area of potential impact. SEA also identified local newspapers to place legal notices announcing the release of the Draft EIS. Public service announcements will be submitted to local radio stations in Toledo. SEA has identified community and business organizations in Toledo, focusing on groups located or serving the area and populations of potential impact. SEA is sending these organizations factsheets on the proposed acquisition and information regarding Draft EIS availability. SEA is sending the Mayor and members of the Toledo City Council a factsheet on the proposed acquisition and notification of Draft EIS availability to facilitate comment.

Mitigation

SEA is currently developing additional mitigation strategies for each of the impacted rail line segments in coordination with local communities and will report on these strategies in the Final EIS. As SEA continues to perform public outreach, SEA will determine the extent and nature of the potential environmental justice impacts. If an environmental justice impact exists at any of the noted locations, SEA will determine if mitigation would be practicable. This coordination with the local communities as part of the on-going public outreach process will be reported in the Final EIS.

5-OH.19 OHIO CUMULATIVE EFFECTS

Within the State of Ohio, the Applicants propose the following activities that meet or exceed the Board's thresholds for environmental analysis: increased traffic on 35 rail line segments, at 4 rail yards, and at 2 intermodal facilities; 2 proposed abandonments; and 9 new construction projects. The nine new constructions are comprised of three rail line connections, a relocated

intermodal facility at Collinwood Yard in Cleveland, a new fueling facility at Willard Yard, and four of the Seven Construction rail line connection projects approved separately by the Board on November 26, 1997. Table 5-OH-51 addresses other potential actions brought to SEA's attention that, when combined with the proposed Acquisition, could contribute to a cumulative impact. SEA was made aware of these activities through site visits and public comment. Local agencies provided the information below to SEA within the schedule specified in the scope for review and analysis.

Table 5-OH-51
Information Provided to SEA About Other Activities or Projects

Action-Type	Site	Information from Site Visit or Public Comment	Relationship to Proposed Acquisition
Responsive Application	Cincinnati (OH)	The City of Cincinnati is working with NS to eliminate the tracks along city's riverfront. A Responsive Application seeks trackage rights on these tracks.	Not related to primary application. Subject of Responsive Application.
Abandonment	Toledo (OH)	Metro Regional Transit Authority notes three publicly funded passenger rail studies completed on affected routes.	Related.
Rail Line Segment	Lorain (OH)	Port Authority and Regional Transit Authority anticipate purchase of NS rail line to extend commuter rail between Cleveland and Lorain. Also development of rail corridor from Wellington to Lorain via USS/Kobe Steel.	Related. Traffic will increase on the rail segments in this area.
Rail Line Segment	Toledo (OH)	Concerns about additional rail traffic generated by new auto facility.	Related.
Rail Line Segment	Akron (OH)	Approximately $10.7 million in FTA funds spent to develop commuter rail service.	Related. Commuter service could be added to rail lines affected by the proposed Acquisition.
Abandonment	Toledo to Maumee (OH)	Local agencies report abandonment as site of future recreation/trails corridor in local plans.	Related.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. The active presence of commuter rail planning projects in Toledo, Akron, Lorain, and Cleveland indicate local efforts that may

represent a cumulative effect related to the proposed Acquisition. Likewise, Cincinnati's concern detailed in a Responsive Application notes local planning to remove freight rail traffic from the Eastern Riverfront Corridor district. This could represent a cumulative effect if pursued. In Toledo, local efforts to establish a recreational corridor along a proposed abandonment may represent a cumulative effect that is beneficial and consistent with the proposed Acquisition.

SEA reviewed the proposed commuter rail plans and the Applicants' Operating Plans, and performed site visits along the affected rail line segments. SEA has determined that evidence exists of a potential cumulative effect associated with commuter rail planning and funded activities in Northern Ohio including, but not limited to, Toledo, Akron, Lorain and Cleveland. There is evidence of a potential beneficial cumulative effect with the proposed Toledo abandonment. If the Responsive Application is approved, there is evidence of a potential cumulative effect along the Eastern Riverfront Corridor district in Cincinnati.

At this point in its investigation, SEA is unaware of any other activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no other significant cumulative effects associated with the proposed Acquisition in the State of Ohio.

Cumulative Effects Mitigation Measures

SEA encourages the Applicants to meet with the agencies responsible for the commuter rail studies to ensure that the proposed Acquisition can be accomplished without negative effect to commuter rail plans. SEA has concluded at this time that there would be no other significant cumulative effects associated with the proposed Acquisition that would require mitigation.

5-OH.20 OHIO AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. Table 5-OH-52 provides a list of agencies and local governments that have submitted environmental comments for the State of Ohio. A complete list of entities that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-OH-52
Agencies in Ohio Submitting Environmental Comments

Entity	Nature of Comment(s)
Akron Metropolitan Transportation Study	Safety, commuter operations, and abandonments
Attorney General	Regarding the following issues in Fostoria and Cleveland: safety, environmental justice, traffic congestion, emergency response, noise, and air
Bay Village Schools	At-grade crossing delay and emergency response
Bay Village, City of	Emergency response, noise, traffic congestion, hazardous materials, air, and at-grade crossing safety
Bucyrus Historical Society	Abandonment re-use
Butler County Engineer's Office	At-grade crossing safety
Cincinnati, City of	Safety
Cleveland, City of	Safety, at-grade crossing safety and-delay, emergency response, environmental justice, and noise
Department of Natural Resources	Land use and coastal zone
Fairfield County Commissioners	Hazardous materials and water resources
Greater Cleveland Regional Transit Authority	Commuter operations
Huron County Board of Commissioners	Safety and land use
Lakewood, City of	Emergency response, noise, traffic congestion, hazardous materials, air, and at-grade crossing safety
Lorain County Community Alliance	At-grade crossing safety, commuter operations, air, noise, and hazardous materials
Lorain Port Authority	Abandonment and land use
Lorain City Council	Emergency response, safety, traffic congestion, hazardous materials, and commuter operations
Metro Regional Transit Authority	Commuter operations, safety, and intercity passenger service
Mid-Ohio Regional Planning Commission	At-grade crossing safety
Northeast Ohio Four County Regional Planning & Development Organization	Commuter operations
Northeast Ohio Areawide Coordinating Agency	Safety, air, noise, emergency response, and commuter operations

Table 5-OH-52
Agencies in Ohio Submitting Environmental Comments

Entity	Nature of Comment(s)
Oak Harbor, Village of	Traffic congestion, noise, and at-grade crossing safety
Ohio Historic Preservation Office	Cultural resources
Ohio-Kentucky-Indiana Regional Council of Governments	Rail operations, abandonment, commuter operations, and transportation
Olmsted Falls, City of	Emergency response, air, and traffic congestion
Rocky River, City of	Emergency response, noise, traffic congestion, hazardous materials, air, and at-grade crossing safety
Rocky River School District	Safety, emergency response, at-grade crossing safety, noise, air, and hazardous materials
Sierra Club - Northeast Ohio	Air, noise, emergency response, and commuter operations
Smythe, Cramer Company	Safety
Toledo-Lucas County Planning Commission	Abandonment and cultural resources
Toledo Metropolitan Area Council of Governments	Abandonment
U.S. Representative Louis Stokes	Emergency response, at-grade crossing safety, and environmental justice
U.S. Representative Dennis Kucinich	Emergency response, hazardous materials, and at-grade crossing safety
U.S. Senator Mike DeWine	Emergency response, hazardous materials, and at-grade crossing safety
Westlake, City of	Emergency response, at-grade crossing safety, hazardous materials, noise, air, and traffic congestion

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.

SEA recognizes special concerns raised in the metropolitan Cleveland area and along the Toledo-Deshler rail line segment. These areas are addressed below.

5-OH.20.1 Greater Cleveland, Ohio Area

Cleveland is located at an important intersection of some of the busiest east-west freight rail lines in the eastern United States. The Cleveland, Ohio, area is shown in Figure 5-OH- 10, which is presented at the end of this state discussion. Railroads that traverse the Cleveland area include the former New York Central and Pennsylvania Railroad lines, currently Conrail, as well as the former Norfolk Western/Nickel Plate line, now operated by NS. These lines provide direct service to Detroit, Chicago, and St. Louis to the west, and Pittsburgh, New York, and Washington, D.C. to the east. Current train traffic levels through Cleveland range from 13 to 53 trains per day on individual lines, with some areas being traversed by more than 60 trains per day on multiple line corridors.

City of Cleveland Comments - Cleveland citizens, government officials, and local agencies have voiced numerous concerns about the effects of the proposed Acquisition. A comment and request for conditions filed with the Board by the City of Cleveland stated the following:

- Increased train traffic would produce virtually no benefit to the City of Cleveland.
- Increased traffic would exacerbate problems at highway/rail at-grade crossings.
- Higher levels of train traffic would generate increased noise and vibrations as trains pass near backyards, schools, religious institutions, and hospitals.
- An increased burden on highway infrastructure would result.
- Additional trains would severely compromise Cleveland safety services. The increase in traffic would prevent emergency medical, fire and rescue equipment, and police from reaching homes and businesses.
- Increased train traffic would dramatically increase the risk of exposure to hazardous materials.
- A disproportionate amount of adverse effects would fall on the City's minority and low-income populations.
- Cleveland-area businesses would suffer from delays in receipt of materials and supplies.

In addition to the City of Cleveland's comments, U.S. Representative Dennis Kucinich presented a Responsive Application to the Board on October 21, 1997. This application resulted from his conclusion that the proposed Acquisition should be rejected or modified because of the following:

- The proposed Acquisition would have a detrimental effect on other railroads.
- The proposed Acquisition would result in a loss of jobs.
- The proposed Acquisition would result in a loss of competition for Cleveland-area shippers.
- The proposed Acquisition would frustrate plans for implementing commuter rail passenger services.

Representative Kucinich's application states that an independent regional railroad entity should be established to control freight and passenger rail lines throughout the Cleveland area. All rail carriers in the Cleveland area would need to divest their interests in the rail lines. The trains, along with all shipping contracts, would be under the sole purview of all affected railroads, as selected by the shippers. The independent entity would allow commuter rail traffic along railroad lines that were not suited for high-volume freight train traffic.

Introduction: Cleveland - West Shore

The Applicants propose to re-route and increase freight rail traffic through the City and surrounding areas. As part of this re-routing, NS proposes an average increase of 20.6 trains per day above the current level of 13.5 trains per day on the Cleveland to Vermilion segment (N-080) of the "Nickel Plate" rail corridor (Buffalo-Chicago) on the west side of Cleveland. Lakewood, Bay Village, Westlake and Rocky River, which make up the "West Shore" suburbs of Cleveland, have demonstrated considerable community opposition to the NS post-Acquisition plan for routing additional freight trains through the West Shore corridor. The City of Cleveland has also expressed concern over this increase in train traffic on a portion of the City immediately adjacent to Lakewood and over the highway/rail at-grade crossings on the east side of Cleveland. This section addresses the communities' concerns by presenting the following:

- A description of the existing conditions and the changes in operations proposed by NS.
- A summary of SEA's preliminary findings and impact analysis.
- Potential mitigation measures as proposed by NS, and SEA's preliminary recommendations.

Description of Existing Environment/Rail Operations: Cleveland-West Shore

Two major rail lines traverse the greater Cleveland metropolitan area and affect the West Shore communities. The NS Cleveland-Vermilion main line parallels Lake Erie east-northeast of Cleveland, passes through the City in an east-west direction south of the downtown area, and continues west through established residential sections of Cleveland and the communities of Lakewood, Rocky River, Bay Village, and Westlake. This rail line extends into Lorain County

near the Lake Erie shoreline to the community of Vermilion at the Erie County line, running through largely suburban and rural areas on a single track. This line currently handles 13.5 trains per day. No passenger service is provided on this single-track corridor, although the West Shore suburbs and the Cleveland Regional Transit Authority (RTA), which operates commuter transit rail, have expressed interest in operating commuter rail service along this rail line.

The existing Conrail line (which would be acquired by NS) runs along Cleveland's downtown waterfront area and currently handles substantial volumes of freight rail traffic (48 to 53 trains per day). This rail line parallels the NS line along Lake Erie from Buffalo, New York to Euclid, Ohio, continues along Lake Erie to the downtown area, then runs in a southwesterly direction from the center of Cleveland to the suburb of Berea before it turns west. The Conrail line continues through Elyria to Vermilion, where it crosses the NS line. NS has proposed to construct a new connection between the NS line and the Conrail line just west of Vermilion (See Figure 5-OH-10).

Highway/Rail At-Grade Crossing Safety and Delay - Between the west side of Cleveland and Vermilion, there are 88 crossings (public and private) along the NS line, including 67 highway/rail at-grade crossings. These numerous crossings influence highway traffic patterns on the west side of Cleveland and in the West Shore communities, causing traffic delays while trains pass. Safety concerns raised by all of the affected communities include delays in emergency response, vehicular crossings, and pedestrian access.

The community of Lakewood has 27 highway/rail at-grade crossings within a distance of 2 miles on the NS rail line. Flashing lights have been installed as safety warning devices at all of these crossings. In addition to flashing lights, 13 of the crossings also have gates. In Bay Village and Rocky River, all nine highway/rail at-grade crossings are equipped with flashing lights and gates. On the west side of Cleveland, all six at-grade crossings have flashing lights and gates.

Emergency Response - SEA observed during site visits that train traffic causes delays at the 27 Lakewood crossings, potentially affecting emergency response time. A substantial portion of the Lakewood population, including many elderly citizens, resides north of the rail line, while the major emergency medical facilities and fire rescue services are located south of the tracks. Emergency response delays could also affect the Cudell-Edgewater neighborhood in west Cleveland, Rocky River, Bay Village, Westlake, and communities extending into Lorain County.

Hazardous Materials Transport - Numerous citizens have expressed concern about the transport of hazardous materials by rail through the West Shore communities. According to the Federal Railroad Administration (FRA), 9,000 rail cars of hazardous materials were shipped by NS on the Cleveland-Vermilion line in 1995. If the Board approves the proposed Acquisition, NS has stated that 32,000 cars per year would be routed through this corridor. Movements of hazardous materials by rail are regulated by FRA and take place under the highest level of safety

adopted by the railroads, including special cars and couplers, certain speed restrictions, and track-side safety devices.

Noise - The existing NS rail line runs through several densely populated residential areas on the west side of Cleveland and in the West Shore suburbs. Rail traffic creates rail/wheel noise and the sounding of horns at each of the at-grade roadway crossings.

Air Quality - Local residents have commented on the air quality conditions caused by the current level of rail traffic on the NS Cleveland-Vermilion line. SEA is unaware of any site-specific air quality studies associated with train traffic on this rail line.

Passenger Rail - Currently no passenger service is operated on the NS Cleveland-Vermilion rail line segment. However, the Cleveland RTA has introduced a proposal to use the NS line for commuter rail service to the West Shore suburbs. Amtrak's Lake Shore Limited serving Chicago and New York operates on the Conrail Lakeshore main line between Berea and Cleveland, as does the Capitol Limited serving Washington, D.C. and Chicago.

Post-Acquisition Changes: Cleveland-West Shore

The 1995 baseline data supplied in the Application shows levels of traffic at 13.5 trains per day along the Cleveland-Vermilion rail line. However, NS has also informed SEA that it currently operates 16.4, not 13.5, trains per day. If the Board approves the proposed Acquisition, NS states that traffic on this rail line is expected to increase by 17.7 trains to a total of 34.1 trains per day.

Conrail's Cleveland-Shortline Junction segment (Cloggsville-CP Short) is located on the west-central side of Cleveland. If the Board approves the proposed Acquisition, NS would acquire ownership of this segment and anticipates increasing activity from 2.0 to 4.2 trains per day on this rail line segment. However, NS also envisions that this connection, if upgraded, may be used as an alternate to the single-track Cleveland-Vermilion main line through the West Shore communities (See Figure 5-OH-10).

Summary of Potential Effects: Cleveland-West Shore

SEA identified issues and effects through interviews with City of Cleveland officials, review of the local media, public comments, and various other sources. Most of these issues, which include emergency response delays, crossing safety, and general quality of life are conditions associated with current train traffic levels. An especially serious concern is the separation of emergency response facilities from substantial portions of the West Shore communities.

The communities have also identified the following concerns associated with the proposed Acquisition: increased rail noise and overnight disturbances, particularly involving train horns;

increased transport of hazardous materials; deteriorating air quality; the potential for lowered property values; decreased opportunities for proposed commuter rail; and decreased railroad safety and increased accident rates.

Rail Operations - NS anticipates that its post-Acquisition train volume west of Cleveland would increase from 13.5 trains per day to approximately 34.1 trains per day. NS states that trains entering its system east of Cleveland have no other route except the Cleveland-Vermilion main line prior to the Cloggsville connecting track. This track intersects the NS main line near West 25th Street and Train Avenue in Cleveland and provides a potential alternate route, connecting Cloggsville with Short, continuing on to CP 190, Berea, and then westward to Vermilion.

Highway/Rail At-Grade Crossing Safety and Delay - SEA observed during site visits that an increase in rail traffic on the NS rail line may affect traffic patterns at the numerous highway/rail at-grade crossings in the Cudell-Edgewater area of Cleveland and in Lakewood, Rocky River, and areas in western Cuyahoga and Lorain Counties. The proposed increase in rail traffic may cause significant impacts to vehicular movement and travel times, including emergency response services. In addition, SEA has determined that vehicular delays on cross-street traffic would occur more often under post-Acquisition conditions, particularly if such rail operations coincided with peak highway traffic hours. Cleveland RTA's proposed commuter service could also affect highway/rail at-grade crossing delay and safety.

Emergency Response - The Cities of Lakewood, Rocky River, Bay Village, Westlake and Cleveland have indicated that one of the most important issues facing their communities in regard to the proposed Acquisition is emergency vehicle delay. SEA acknowledges these concerns and, accordingly, has conducted a more detailed analysis of delay associated with highway/rail at-grade crossings on the west side of Cleveland and in the West Shore suburbs.

No national standards exist for measuring levels of significance of delay specifically for emergency vehicles. Obviously, time is critical for these vehicles to reach the scene of an accident, fire, or other emergency. A train could be moving through a highway/rail at-grade crossing, causing the crossing to be closed to an emergency response vehicle.

Because of the uncertainty of events requiring emergency response, SEA evaluated potential delay due to trains blocking roadways. SEA measured the crossing delay per stopped vehicle as well as the total daily blocked crossing time. Because of the great variation in incident response factors such as routing and emergency facility locations associated with thousands of crossings and hundreds of communities, SEA has not correlated these calculations to each community's number of emergency response incidents, nor to the routes taken, nor to the number of occasions where such vehicles have been blocked by trains. SEA's analysis of pre- and post-Acquisition conditions for highway/rail at-grade crossings at each of these communities does, however, allow the respective communities to review the relative potential impact of the proposed Acquisition.

SEA estimated pre- and post-Acquisition emergency vehicle response delays at highway/rail at-grade crossings similar to methods used for estimating delays for general roadway vehicular traffic. Table 5-OH-11 at the end of this state discussion, presents detailed data on pre- and post-Acquisition train information, as well as the estimated vehicle delay times, for all highway/rail at-grade crossings in Ohio. Table 5-OH-53 summarizes pre- and post-Acquisition delays and blockage times for the West Shore communities and the west side of Cleveland on the NS Cleveland-Vermilion rail line segment. Differences in estimated train speeds at different crossings account for the variations in delay and blockage times.

Table 5-OH-53
Estimated Maximum Delay (in Minutes) for At-Grade Roadway Crossings on NS Cleveland-Vermilion Line

Roadway	Average Daily Traffic	Crossing Delay per Stopped Vehicle			Total Blocked Crossing Time per Day		
		Pre-Acquisition	Post-Acquisition	Increase	Pre-Acquisition	Post-Acquisition	Increase
West 110th St.	5,970	2.40	2.45	0.05	28.09	72.41	44.32
West 117th St.	15,610	2.52	2.58	0.06	28.09	72.41	44.32
Bunts Rd.	5,300	2.36	2.41	0.05	28.09	72.41	44.32
Columbia Rd.	11,320	2.16	2.20	0.04	21.69	55.80	34.11
Dover Center Rd.	7,650	1.94	1.98	0.04	21.69	55.80	34.11
Bradley Rd.	5,670	1.84	1.88	0.04	21.69	55.80	34.11

SEA has not predicted frequencies of delay for emergency response vehicles, due to the inherent uncertainties and obvious localized issues such as locations of responding emergency vehicles.

It is SEA's preliminary recommendation that NS consult with the City of Cleveland and the West Shore communities to agree on measures to minimize or mitigate the effects of increased emergency vehicle delay. Possible mitigation measures could include increasing train speeds, upgrading communications between the railroad and the emergency dispatch center, or constructing a grade separation.

Noise - A post-Acquisition increase of rail traffic on the NS Cleveland-Vermilion corridor would increase noise levels from both mechanical wheel/rail noise and horn soundings. SEA noted during site visits that wheel/rail noise from train operations may last three to four minutes per location, gradually dissipating as a train passes. Horn noise is required to warn vehicles and pedestrians of an oncoming train but can also cause the greatest annoyance. For instance, locomotives must sound their horns through much of Lakewood because its 27 highway/rail at-grade crossings are spaced only hundreds of feet apart. If Cleveland RTA's efforts to inaugurate

commuter service along the NS West Shore rail corridor are successful, the commuter train horns could also increase noise levels.

Air Quality - Cuyahoga County is classified as nonattainment for particulate matter, maintenance for ozone, and maintenance for carbon monoxide. Lorain County is deemed nonattainment for sulfur dioxide and maintenance for ozone. It is SEA's preliminary determination that any air quality impacts in the corridor would be localized and would not be severely worsened by increased rail traffic. The analysis of air quality in Ohio is discussed further in Section 5-OH-12, while system-wide and regional evaluations are discussed in Section 4.12, "Air Quality.".

Environmental Justice - As part of the overall outreach strategy in the Cleveland area, SEA is conducting a public outreach program in neighborhoods on the Short-Berea rail line segment that runs through west Cleveland. This plan is being implemented in the event that a mitigation plan proposed by NS described below in "Preliminary Recommended Mitigation" is deemed acceptable by all parties.

Commuter Rail Service - Cleveland RTA is formulating proposals to introduce commuter rail service on the NS Cleveland-Vermilion segment from Cleveland to the western suburbs. A discussion of this potential commuter rail system is presented in Section 5-OH-8.

Preliminary Recommended Mitigation: Cleveland-West Shore

Proposed NS Mitigation Activities - NS has identified a potential alternative routing through Cleveland that would shift all of the projected increased traffic from the West Shore corridor to a rail line that is more industrial in nature. Under this plan, submitted to SEA on October 29, 1997, the NS projected increase of 17.7 trains per day above the current (1997) level of 16.4 trains per day for the Cleveland-Vermilion line would be shifted to the alternative rail corridor that connects Cloggsville and Berea, known as the Flats Industrial Track. If this NS mitigation proposal is implemented, the West Shore communities would experience no increase in train traffic above current levels. The alternate routing is not presently available, however, and would require the completion of substantial improvements and construction of track and ancillary facilities. NS has indicated a willingness to work with Federal, state, and local officials to garner the requisite support and approvals for such a project. The re-routing proposal is contingent, in part, upon public support and funding.

If this mitigation plan is acceptable to all parties, the increased train traffic on the alternative route may impact certain low-income neighborhoods in west Cleveland. Therefore, as part of the overall general outreach strategy for Cleveland, SEA is conducting a public outreach program for neighborhoods on the Cleveland-Short rail line segment that runs through west Cleveland.

The proposed alternate route would require modification of a proposed connecting track construction at Vermilion between the NS main line and the current Conrail Chicago-Cleveland main line. The newly configured connecting tracks would allow NS rail traffic to move in both directions over the existing Conrail main line via Berea to Rockport Yard and the Flats Industrial Track.

The mitigation project would include construction of a new connecting track and upgrading of the 7.5 miles of secondary trackage between Conrail's Rockport Yard and Cloggsville. This element of the proposal involves the most substantial construction, including track, bridge and signal activity. These improvements would permit NS to operate trains over the Cloggsville connection, which has no highway/rail at-grade crossings, at a speed of 40 miles per hour except in certain portions of the Rockport Yard area.

The mitigation plan includes provisions for two additional grade separation projects at Front Street in Berea and Fitch Street in Olmsted Falls on the existing Conrail line from Berea-Vermilion. The Berea separation would need to involve both the NS and CSX tracks at this location. NS has indicated it will seek to obtain the support of CSX for this proposed project.

In addition to the re-routing alternative, NS proposes to eliminate several unnecessary highway/rail at-grade crossings in Lakewood and to upgrade the remaining 17 crossings along the corridor from west of Cloggsville to Vermilion by installing automatic gates to supplement the existing flashing lights. NS also proposes to upgrade the Beaver Park Road highway/rail at-grade crossing in Lorain to include both flashing lights and gates. The proposed re-routing would result in increases beyond those described in the Applicants' Operating Plan at Vermilion-CP 190 (Conrail main line) and CP 190-Cloggsville via Rockport Yard.

NS estimates the cost of the proposal to reroute the increased NS rail traffic resulting from the proposed Acquisition at approximately $50,000,000. This preliminary cost, as presented by NS, does not included street and highway/rail at-grade crossing closings.

Bay Village, Rocky River, and Lakewood Mitigation Activities - The Cities of Bay Village, Rocky River, and Lakewood state in their comments of October 15, 1997 to the Board that the best mitigation that SEA can recommend is a condition limiting NS traffic over the rail line segment to the 1995 base level of 13.5 trains per day. As previously stated, currently, NS operates 16.4 trains per day over this rail line segment. The Cities state that the required mitigation should include the following:

- The Board should retain jurisdiction to impose additional environmental mitigation for a period of no less than ten years.

- NS should be required to improve its highway/rail at-grade crossings on this rail line segment. For at-grade crossings with ADTs of less than 5,000 vehicles, gates and lights

should be required. For at-grade crossings with ADTs of greater than 5,000 vehicles, grade separations should be constructed.

- If train speeds can be increased without increasing safety problems, NS should be required, at its sole expense, to improve the rail line segment to permit its trains to operate at faster speeds.

- To mitigate noise problems, NS should be required to follow the best practices permitted by FRA.

Preliminary SEA Recommendations - Based on all information currently available, SEA's preliminary recommendation is that NS continue to consult with local and county government agencies, the Ohio Department of Transportation, and elected representatives from the West Shore suburbs and the City of Cleveland to address concerns about traffic increases on the Cleveland-Vermilion rail line segment. Specifically, NS shall meet with these parties to negotiate a mutually-acceptable binding agreement on the construction and funding allocation of NS's preliminary alternative routing plan to balance train traffic on the Cleveland-Vermilion rail line segment and the Lakeshore line through Berea. Associated improvements could include new rail connections, possible grade separations, upgrading warning devices at some highway/rail at-grade crossings, and at-grade crossing closures.

Norfolk Southern submitted a preliminary mitigation plan to SEA on October 29, 1997. This proposed plan, described above in "Proposed NS Mitigation Activities," provides an alternative routing plan, upgrades several rail facilities, eliminates several highway/rail at-grade crossings, and improves the crossing protection at other at-grade crossings. SEA invites public comments on appropriate alternative mitigation that the Board could require in the event that the parties cannot reach a mutually-acceptable binding agreement.

Introduction: Cleveland - Central and East

The proposed Conrail Acquisition involves shifting freight rail traffic from the current Conrail Lakeshore alignment on the east side of downtown Cleveland to a CSX alignment that would route rail traffic through the east side of the City and then westward to Short and south to Berea. Rail lines on the new Berea CSX routes would experience substantial traffic increases -- as much as 40 trains per day on some segments -- due to the shift in traffic patterns. NS routes through east and central Cleveland would not change, although all NS lines would experience increases in train traffic levels ranging from 3.7 to 23.6 trains per day. NS and CSX run in a common corridor from Superior Avenue in East Cleveland south through the Woodland area of Cleveland to Broadway Avenue. In this common corridor, total NS and CSX post-Acquisition traffic levels would range from 66.3 to 73.5 trains per day. In the triangular area centered on Buckeye Road between Woodhill Road and Woodland Avenue, pre-Acquisition train levels total approximately 28 trains per day. Post-Acquisition, approximately 110 NS and CSX trains would use the three

rail lines bordering this triangular area. These major shifts and increases in train traffic on the east side of Cleveland have generated considerable public comment and expression of concern by the City of Cleveland (See Figure 5-OH-10). The following section presents:

- A description of the existing conditions on the east side of Cleveland that relate to these issues.
- Changes in rail operations that would occur if the Board approves the proposed Acquisition.
- The City of Cleveland's concerns regarding the proposed changes.
- A summary of SEA's preliminary findings and impact analysis.
- Potential mitigation measures and SEA's public outreach efforts.

Description of Existing Environment/Rail Operations: Cleveland-Central and East

Highway/Rail At-Grade Crossings - The proposed routes through the central and eastern parts of Cleveland are largely grade-separated except for five highway/rail at-grade crossings, three in the Nottingham area and two in the city's southeast area near Broadway Avenue. An additional five highway/rail at-grade crossings are located on Cleveland's west side; these crossings are addressed as part of the West Shore community discussion earlier in this section.

Emergency Response - The City of Cleveland has indicated that current emergency response service strategies have been designed around existing railroad infrastructure and train operations that have been in place for approximately 25 years. The City has expressed concern regarding increased emergency vehicle delays that may result from increased train operations through highway/rail at-grade crossings.

Hazardous Materials Transport - The City of Cleveland and many individual residents have expressed concern about the current transport of hazardous materials through the City. As with the majority of lines in the Conrail, CSX, and NS systems, freight traffic includes the transport of hazardous materials. Transportation of hazardous materials by rail are regulated by the Federal Railroad Administration.

Noise - Rail lines traverse a number of densely populated residential areas in Cleveland. Current rail traffic causes rail/wheel noise system-wide and the sounding of horns at each at-grade crossing. Given the limited number of highway/rail at-grade crossings in the city, the predominant source of rail noise is rail/wheel noise and noise associated with locomotives.

Vibration - Vibration is common along rail lines system-wide but is most noticeable in dense urban areas where structures are built close to the railroad right-of-way. Typically, train wheels rolling on the rails create vibration that is transmitted through the track support system into the ground. The vibration of track support shakes the adjacent ground, resulting in vibrations that are transmitted through the soil and rock. Ground-borne vibration is typically less annoying to people who are outdoors than to people in buildings.

Environmental Justice - In the central and eastern areas of Cleveland and in neighboring East Cleveland, certain rail line segments traverse predominantly minority (primarily African-American) and low-income neighborhoods. The affected rail segments include the CSX Mayfield-Marcy and Quaker-Mayfield lines, and the NS Cleveland-Ashtabula and White-Cleveland lines. Freight rail traffic currently runs through these areas of the city on primarily grade-separated right-of-way.

Air Quality - Cuyahoga County is classified as nonattainment for particulate matter, maintenance for ozone, and maintenance for carbon monoxide. The City of Cleveland has identified locomotive engine fumes and air-borne dust as current concerns that may be affected by Acquisition-related rail traffic increases.

Passenger Rail - Amtrak operates two trains per day to Pittsburgh and Buffalo from Cleveland on the current Conrail lines, and four trains per day on the Lakeshore main line between Cleveland and Chicago. In addition, Cleveland's Regional Transit Authority (RTA) operates an independent transit rail system throughout the greater Cleveland metropolitan area. At certain locations, RTA shares parallel rail corridor right-of-way with Conrail and NS.

Post-Acquisition Changes: Cleveland-Central and East

If the Board approves the proposed Acquisition, NS and CSX would divide ownership of the two railroad routes that traverse the greater Cleveland metropolitan area. As a result, the flow of rail traffic would be substantially restructured as indicated below:

Lakeshore Route:

- *Existing Conrail Operations:* Conrail's existing Chicago Line, commonly known as the Lakeshore route, parallels Lake Erie between Buffalo and the Cuyahoga River in Cleveland before swinging southwest through Berea and Olmsted Falls en route to Vermilion and Chicago. Conrail also owns and operates the Short Line route, which diverges from the Lakeshore alignment at Quaker (just west of Collinwood), continues south to Mayfield (University Circle area) and to Marcy south of Harvard Avenue. From Harvard Avenue it swings west through Parma and Short before rejoining the Lakeshore Route at Berea.

- *Proposed Acquisition:* The Applicants would divide the ownership and operation of Conrail's Lakeshore route at CP 181, near East 26th St. and the Shoreway, between CSX (east to Buffalo) and NS (west to Chicago). CSX would obtain trackage rights between CP 181 and Berea, and also acquire the Short Line from Quaker to Berea. NS would obtain trackage rights from CSX on the Short Line. Due to the split in ownership at CP 181, CSX would divert approximately 35 to 40 additional trains per day to the Short Line to connect, in combination with the Conrail Indianapolis Line, with the CSX main line to Chicago at

Greenwich, Ohio. A limited amount of rail traffic (13 trains per day) would remain on the portion of the Lakeshore route between Quaker and CP 181.

Cleveland - Pittsburgh Line:

- *Existing Conrail Operations:* Conrail's Cleveland Line (the former Pennsylvania Railroad) from Pittsburgh via Alliance, Ohio, enters the Cleveland area from the southeast (paralleling Broadway Avenue), travels through Garfield Heights, and continues through the east-central side of Cleveland before joining the Lakeshore route at Drawbridge.

- *Proposed Acquisition*: NS would acquire this alignment (White-Cleveland, White-Alliance) and would add 17 trains per day to the 12 trains per day currently operating on the White-Cleveland rail line segment. Many of these trains currently operate over the Short Line to Berea which would be conveyed to CSX. NS would divert these trains to Drawbridge and run them west on the Lakefront route to Berea.

Cleveland - Indianapolis Line:

- *Existing Conrail Operations:* Conrail's Cleveland-Indianapolismain line diverges from the Cleveland Short Line in the vicinity of Parma (CP Short), passing through Berea en route to Indianapolis.

- *Proposed Acquisition:* Following the Board's approval of the proposed Acquisition, CSX would acquire ownership of Conrail's Indianapolis Line. The majority of the rail traffic diverted from the Lakeshore route would follow this alignment southwest to Greenwich where the Indianapolis Line crosses CSX's main line to Chicago. CSX projects that it would operate 54.2 trains per day over the segment between Berea and Greenwich, an increase of 39.7 trains per day over the base year average of 14.5 trains per day.

NS Nickel Plate Line:

- *Existing NS Operations:* The NS Buffalo-Chicago (Nickel Plate) main line parallels Lake Erie from Buffalo, runs through Cleveland south of the downtown area, and heads west through Lakewood, Rocky River and Bay Village to Vermilion. This line currently handles an average of 16.4 trains per day west of the Cuyahoga River.

- *Proposed Acquisition:* Ownership would not change. Rail traffic on this NS line is projected to increase over current volumes by a projected average of 20.6 trains per day west of Cleveland, and 23.6 trains per day east of Cleveland. Rail traffic routed along this corridor would flow primarily from the Buffalo area with a smaller portion routed from the Pennsylvania corridor through Youngstown and Ashtabula.

CSX Lester Secondary Line:

- *Existing CSX Operations:* CSX's Cleveland-Lester Secondary main line enters the greater Cleveland area from the south, terminating at CSX's Clark Avenue Yard.

- *Proposed Acquisition:* Ownership and current service levels are expected to remain the same on the Lester Secondary main line.

Summary of Potential Effects: Cleveland-Central and East

Rail Operations - NS post-Acquisition traffic routed through eastern and central Cleveland would not change. Operations on the NS Nickel Plate line would increase from 16.4 to 34.1 trains per day. Operations on the Conrail White-Cleveland line to be acquired by NS would increase from 12.5 to 29.7 trains per day. CSX post-Acquisition traffic routed through Cleveland would flow to, or originate from, the former New York Central Lakeshore route from Buffalo. Between Ashtabula and Quaker (just west of Collinwood Yard), rail traffic would increase from 48.3 to 54.2 trains per day, including several CSX trains routed onto CSX's Lakeshore main line from the Youngstown area.

To efficiently access CSX's main line to Chicago at Greenwich, CSX intends to divert 35 to 40 trains per day to the Short Line between Quaker and Berea. This alignment passes through predominantly low-income, minority neighborhoods in eastern portions of Cleveland as well as the western edge of East Cleveland. CSX's Operating Plan (described below) depends on this diversion of traffic to the Short Line. The Short Line continues southwest from Berea on the Indianapolis Line. Some rail traffic may remain on the Lakeshore route through central Cleveland via Drawbridge at the Cuyahoga River, rejoining the Indianapolis Line at Berea.

If CSX traffic remains on the Lakeshore Route via Drawbridge as an alternative to the diversion of trains through Cleveland's east side, and the alternative NS routing (described in the West Shore section) using the Cloggsville connection is implemented to avoid routing NS train traffic through the West Shore suburbs, the CSX traffic would be mixed with NS traffic in the vicinity of Berea. This would result in 95.9 NS and CSX trains per day operating on the 3.7-mile section of rail line between CP 190 (near Brookpark Road) and Berea. Operating difficulties may also result because all 47.3 CSX trains on the Lakeshore Route would have to cross over tracks at the Berea interlocking to reach the CSX Indianapolis Line, creating delays to both NS and CSX trains (See Figure 5-OH-10).

Grade Crossings Delays and Safety - The proposed routes through the central and eastern parts of Cleveland are largely grade-separated, except for five highway/rail at-grade crossings. Nine primary and secondary schools and five public parks are located near highway/rail at-grade crossings in the Euclid Green-South Collinwood and Kinsman-South Broadway neighborhoods

of Cleveland. SEA observed pedestrian and vehicular activity at the affected crossings during site visits.

The City of Cleveland has identified access to and from local businesses as a potential issue. In addition, the City has noted that an increase in train traffic resulting in vehicular delays may affect public safety at the five highway/rail at-grade crossings, including the safety of children crossing the tracks.

Emergency Response - The City of Cleveland has indicated that one of the most important issues regarding the proposed Acquisition is emergency vehicle response. As a result, SEA has conducted a more detailed analysis of delay associated with highway/rail at-grade crossings on the east side of the city.

SEA has identified five highway/rail at-grade crossings on the east side of Cleveland. All are located on NS lines: Dille, Wayside, and London Roads on the Cleveland-Ashtabula rail line segment (N-075), and Bessemer and Aetna Avenues on the White-Cleveland rail line segment (N-081). Of the five crossings, those at Dille and London Roads would meet or exceed the Board's thresholds for environmental analysis as a result of the proposed Acquisition.

No national standards exist for measuring levels of significance of delay specifically for emergency vehicles. Obviously, time is critical for these vehicles to reach the scene of an accident, fire, or other emergency. A train could be moving through a highway/rail at-grade crossing, causing the crossing to be closed to emergency response vehicles.

Because of the uncertainty of events requiring emergency response, SEA evaluated potential delay due to trains blocking roadways. SEA measured the crossing delay per stopped vehicle as well as the total daily blocked crossing time. Because of the great variation in incident response factors such as routing and emergency facility locations, SEA has not correlated these calculations to each community's number of emergency response incidents, nor to the routes taken, nor to the number of occasions where such vehicles have been blocked by trains. SEA's analysis of pre- and post-Acquisition conditions for at-grade crossings at each of these communities does, however, allow the respective communities to review the relative potential impact of the proposed Acquisition.

SEA measured pre- and post-Acquisition emergency vehicle response delays at highway/rail at-grade crossings similar to methods for measuring the delay for general roadway vehicle traffic.

Table 5-OH-11, at the end of this state discussion, presents detailed data on pre- and post-Acquisition train information as well as the estimated blockage times for all highway/rail at-grade crossings in Ohio. Table 5-OH-54 below summarizes pre- and post-Acquisition delays for two crossings on the east side of Cleveland that meet the Board's thresholds for environmental analysis. Both affected crossings occur on the NS Ashtabula-Cleveland rail line

segment, which would experience an increase of 23.6 trains per day as a result of the proposed Acquisition. Differences in estimated train speeds at different highway/rail at-grade crossings account for the variation in delay.

Table 5-OH-54
Estimated Maximum Delay (in Minutes) for At-Grade Roadway Crossings on NS Cleveland-Ashtabula Line

Roadway	Average Daily Traffic	Crossing Delay Per Stopped Vehicle			Total Blocked Time Per Day		
		Pre-Acquisition	Post-Acquisition	Increase	Pre-Acquisition	Post-Acquisition	Increase
London Road	5,310	2.36	2.41	0.05	27.05	77.72	50.67
Dille Road	15,430	2.46	2.51	0.05	20.89	59.89	39.00

SEA has not predicted frequencies of delay for emergency response vehicles due to inherent uncertainties and obvious localized issues, such as locations of responding emergency vehicles.

It is SEA's preliminary recommendation that NS consult with the City of Cleveland to reach agreement on measures to minimize or mitigate the effects of increased emergency vehicle delay. Possible mitigating measures could include increasing train speeds, upgrading communications between NS and the emergency dispatch center, or constructing a grade separation.

Noise - According to City of Cleveland estimates, more than 60,000 people live within 1,000 feet of rail lines affected by the proposed Acquisition. An increase in the number of trains would proportionally increase the level of noise to sensitive receptors in the area.

For locations where the Board's environmental analysis thresholds would be exceeded, SEA calculated the 65 dBA L_{dn} noise contours for the pre- and post-Acquisition conditions. SEA made a preliminary determination that the following Cleveland rail line segments have noise-sensitive receptors exceeding 65 dBA L_{dn}: Marcy-Short, Mayfield-Marcy, Quaker-Mayfield, Short-Berea, Cleveland (Drawbridge)-Short, Cleveland-Ashtabula, Vermilion-Cleveland, and White-Cleveland. Various sensitive receptors such as schools, libraries, hospitals, residences, retirement communities, and nursing homes exist within the noise contours for both pre-Acquisition and post-Acquisition operating conditions.

For areas affected by wheel/rail wayside noise, SEA determined that rail line segments eligible for noise mitigation include segments where noise sensitive receptors are exposed to at least 70 dBA L_{dn} and an increase of at least 5 dBA L_{dn} due to increased rail activity resulting from the proposed Acquisition. It is SEA's preliminary determination that portions of the following CSX rail line segments in the City of Cleveland could warrant noise mitigation: Mayfield-Marcy,

Quaker-Mayfield, and Short-Berea. The area between Quaker and Harvard Avenue (which includes the Quaker-Mayfield and Mayfield-Marcy rail line segments) includes approximately 470 known sensitive receptors. Portions of this rail corridor would have a cumulative increase from 21 to approximately 90 NS and CSX trains per day. SEA also observed that portions of this rail line segment in the Quaker-Mayfield section are elevated. There are no natural noise barriers to mitigate the effects of wayside noise on second- and third-story residential units adjacent to these particular sections. Other portions of this rail line on the east side of Cleveland, in the vicinity of Kinsman, are below-grade and thus substantially shielded from the neighboring communities.

Hazardous Materials Transport - Under the proposed Acquisition, four CSX line segments would be designated as "key routes." As defined by the Association of American Railroads, a key route is any track with a combination of 10,000 car loads or intermodal portable tank loads of hazardous materials transported over a one-year period. The four CSX and one NS rail line segments that SEA identified are shown in Table 5-OH-55.

Table 5-OH-55
Key Routes for Hazardous Materials in East Side of Cleveland

Segment #	Between	And	Length (miles)	1995 Base (cars/yr)	Post Acquisition Hazardous Material (cars/yr)	Change Hazardous Material (cars/yr)
C-072	Mayfield	Marcy	3	0	44,000	44,000
C-073	Quaker	Mayfield	6	0	44,000	44,000
C-069	Marcy	Short	9	4,000	44,000	40,000
C-074	Short	Berea	4	4,000	44,000	40,000
N-081	White	Cleveland	11	12,000	34,000	22,000

Vibration - Cleveland has identified the central and eastern areas of Cleveland as having the potential for increases in vibration caused by increased railroad activity. Factors that influence vibration include vehicle speed and suspension, wheel and track type and condition, track support system, soil type, soil-rock layering, depth to water table, and building construction type. However, there are no specific impact guidelines that assess potential vibration impacts on the basis of increases or decreases in train traffic levels.

Based on known study methods, residential buildings within 120 feet of the railroad track may be subject to vibration that exceed the Federal Transit Administration (FTA) "human response" vibration impact criterion. FTA has determined that it is very unlikely for freight train activity

at any level to cause damage to buildings, though low-level vibrations may be felt by people living near the rail line. (FTA, Transit Noise and Vibration Impact Assessment, April 1995.)

Air Quality - SEA did not evaluate potential air quality effects of the proposed Acquisition in Cleveland but, rather, evaluated potential increased air pollutant emissions in Cuyahoga County, which encompasses the greater Cleveland metropolitan area. SEA's evaluation found potential emissions increases to be negligible in Cuyahoga County for all pollutants except oxides of nitrogen (No_x). Emissions of NO_x are a concern because they can enhance formation of ozone (O_3). The increase in NO_x emissions, while not negligible, would only account for 1.3 percent of the current county total inventory. This increase would be too small to have a measurable effect on ozone concentrations in Cleveland. Also, recent scientific studies indicate that NO_x impacts on ozone formation result primarily from larger-scale regional emissions, rather than local emissions. The analysis of air quality in Ohio is discussed further in Section 5-OH.12, while system-wide and regional evaluations are discussed in Section 4.12, "Air Quality."

Environmental Justice - SEA conducted analysis according to draft Council on Environmental Quality guidelines and Executive Order 12898 to determine if minority or low-income groups would be disproportionately affected by the proposed Acquisition. Results indicate that the following minority and low-income neighborhoods in Cleveland may be affected:

Forest Hills - Euclid-Green - South Collinwood:

- CSX rail line segment from Coit Road, south along East 131st Street corridor and East Cleveland border.

- NS rail line segment from the Euclid City border, southwest along Euclid Avenue, to the East Cleveland border.

Kinsman - Broadway:

- CSX rail line segment from Woodland Avenue west of Woodhill Road on the north, to Garfield Heights on the south.

- NS rail line segment from the Cuyahoga River, south of Lorain Avenue, east to Woodland Avenue and Buckeye Road.

Little Italy - University - Fairfax:

- CSX/NS rail line segments from Euclid Avenue/Wade Park on north, southwest to Woodland Avenue on the south.

Edgewater-Cudell-Detroit and Shoreway-Ohio City:

- NS rail line segment from W. 117th Street, north of Detroit Avenue, east to Cuyahoga River.

Goodrich - Central - Fairfax:

- NS rail line segment from the Shoreway/E. 18th Street on the north and west to Woodland Avenue/E. 79th Street on the south and east.

Proposed rail increases could affect these populations because of the following:

- The lack of financial resources and options to move away from the affected area.
- The lack of financial resources to install necessary home improvements such as sound insulation, air conditioning and air filters.
- A higher number of senior citizens, disabled persons and children represented in lower-income households who are prone to the hazards associated with freight rail lines such as limited mobility and sensitivity to noise or other impacts.

Rail line segments within the greater Cleveland metropolitan area that are routed through these low-income and minority neighborhoods include the CSX Quaker-Mayfield and Mayfield-Marcy lines, and the NS Cleveland-Ashtabula and White-Cleveland lines.

SEA is preparing an outreach plan for the neighborhoods along the targeted rail line segments with the goal of effectively reaching Cleveland's diverse populations. The purpose of these outreach efforts is to ensure that the community is informed of the proposed Conrail Acquisition and to provide opportunities to comment on the proposed Acquisition plan and this Draft EIS.

Passenger Rail Service - Amtrak operates two trains per day east of CP 181 on the Lakefront route, and four trains to the west. SEA has determined that there are no anticipated impacts on Amtrak service to and from Cleveland. See Section 5-OH.8 for further discussion of proposed passenger rail service in Ohio, including commuter service proposed by the Cleveland Regional Transit Authority.

Preliminary Recommended Mitigation: Cleveland-Central and East

Community Requests for Mitigation. - The Mayor's Task Force of the City of Cleveland has submitted the following proposed mitigation:

- Through rail traffic should be re-routed away from Cleveland. NS and CSX have other substantial networks that would allow traffic originating or terminating in the mid-Atlantic region that currently passes through Cleveland to reach Midwest destinations such as Chicago.

- CSX and NS should carefully examine the existing routes of all three rail carriers to determine whether shared operations of remaining trains are possible, and/or how the operations on individually owned and operated tracks could be fairly and efficiently conducted.

- CSX and NS should construct grade separations for all highway/rail at-grade crossings on rail line segments that would have an increase in freight traffic.

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

Noise - It is SEA's determination that CSX shall consult with local community and appropriate state agencies to address proposed Acquisition-related train/wheel noise impacts. Measures to reduce or eliminate rail/wheel noise for sensitive receptors experiencing noise levels above 70 dBA L_{dn} could include noise barriers, insulation, landscaping, or train and rail maintenance.

Highway/Rail At-Grade Crossing Safety - Measures include upgrading warning devices and/or grade crossing improvements.

Hazardous Materials Transport - Before initiating the proposed increase in train volume of hazardous material cars, SEA recommends that CSX shall: 1) comply with the Association of American Railroads (AAR) key route requirements and any additional key route requirements it establishes; 2) operate all key trains in compliance with AAR and CSX procedures for key trains; 3) provide a toll-free telephone number providing direct access for dispatch facilities to local emergency response providers; and 4) develop a Hazardous Materials Emergency Plan, in coordination with local emergency response providers, directed at containing and minimizing potential effects of any accidents or incidents. (See Section 7.3.)

Environmental Justice - It is SEA's preliminary recommendation that NS and CSX meet with elected officials and community leaders to address proposed Acquisition-related environmental impacts in affected neighborhoods. Specifically, NS and CSX should meet with these communities to identify and reach agreement on any additional measures to address all relevant matters related to the construction or implementation of measures to reduce any impacts. SEA is coordinating outreach efforts with the City of Cleveland to notify affected populations of the potential impacts on their community and seek input and participation in the environmental review process.

Public Outreach: Cleveland-Central and East

SEA is using numerous means to announce the release of this Draft EIS and involve the local community. SEA is disseminating information and soliciting comments through elected officials, the media, and local organizations identified by the City of Cleveland.

Libraries - SEA is sending copies of this Draft EIS to the branch libraries serving each of the potentially impacted neighborhoods to ensure open access to members of the community.

Media - SEA is sending notices to daily and weekly newspapers that serve Cleveland neighborhoods announcing the release of this Draft EIS and identifying the location of copies available for public review. In addition, SEA is sending public service announcements that detail the release and availability of this Draft EIS to the major radio stations serving the greater east side of the City.

Area Organizations - SEA is sending a fact sheet explaining the proposed Acquisition, potential community impacts, and the environmental review process to the neighborhoods, businesses, and other organizations identified by the City and through local research. SEA has prepared copies of the fact sheet in Spanish and will distribute it to Spanish-speaking communities and individuals as necessary.

Area Officials - SEA is sending fact sheets and notifications of the Draft EIS availability to the members of a Railroad Acquisition Task Force organized by the City of Cleveland to facilitate comment.

Outreach Plan - As part of the environmental review process, SEA has prepared an outreach plan to reach disadvantaged populations that may be affected by a proposed increase in train traffic. It also addresses the neighborhoods potentially impacted by the proposed NS diversion from the Lakewood line to the Cloggsville line. SEA has identified potential impacts through technical analysis, multiple site visits, discussion with City of Cleveland staff, and review of City reports. Because these impacts may affect areas with high minority and/or low-income populations, SEA will comply with draft CEQ guidelines and Executive Order 12898 requirements for public notification and comment.

The purpose of this outreach effort is to ensure that the Draft EIS, notices, and project information are disseminated through avenues that effectively reach the area's diverse population and allow for meaningful public input. The City of Cleveland Task Force, which coordinates the City's involvement in the proposed Acquisition, has expressed a strong interest in making certain the community is well informed. These program elements may be supplemented to accommodate study participants and/or elements from a community outreach plan the Task Force is currently preparing.

5-OH.20.2 Toledo-Deshler Rail Line Segment

Introduction

The Toledo-Deshler rail line segment (C-065), located in northwestern Ohio, traverses Lucas, Henry, and Wood Counties. Beginning in Toledo and proceeding southwest in the direction of Cincinnati, this CSX segment passes through urban and industrial areas, suburban and residential developments in Perryburg, and rural farmland to the south through most of its length.

According to CSX, if the Board approves the proposed Acquisition, this rail line segment would experience the largest percentage increase in rail traffic of all rail line segments, from 0.6 to 14.2 trains per day. CSX based these data, included in the Application, on 1995 rail traffic information. (See Appendix A.) However, in May 1997 CSX added, independent of the proposed Acquisition, 13.6 more trains per day, bringing this segment to a proposed post-Acquisition level of 14.2 trains per day. Because many residents are accustomed to this rail line segment being dormant, three known incidents involving bodily injury have occurred since rail traffic was increased on this line.

Description of Existing Environment/Rail Operations

The Toledo-Deshler line is approximately 36 miles in length and has 67 highway/rail at-grade crossings. Fourteen crossings are protected by flashing lights, and four are protected by gates and flashing lights. The remaining 49 crossings are protected by crossbucks only. In a field investigation conducted in October 1997, SEA identified the following conditions:

- *Signage* - All highway/rail at-grade crossings are protected with crossbucks, and most are also accompanied by yield signs. Some crossings have pavement markings that include stop lines and railroad warnings.

- *Crossing Geometry* - Many of the highway/rail at-grade crossings offer poor visibility for the motorists because of the angle between the intersecting road and railroad tracks. In many cases, the poor line of sight is worsened by intervening brush, trees, and growing crops.

- *Roadway Profile* - Many of the rural highway/rail at-grade crossings have road profile grade anomalies. CSX has re-graded the trackbed, raising the immediate area relative to the existing road. This results in a very rough transition that forces motorists to decelerate to far below the designed speeds.

Summary of Potential Effects and Preliminary Recommended Mitigation

If the Board approves the proposed Acquisition, CSX will continue to operate 14.2 trains per day on the rail line segment. This is an increase of 13.6 trains per day over 1995 base year levels. In reaction, citizens along the Toledo-Deshler segment have raised a variety of highway/rail at-grade crossing safety issues.

After extensive analysis, SEA's preliminary determination is that 14 at-grade crossings in Wood County along this rail line segment would require mitigation. These crossings and SEA's proposed mitigation for each are listed in Table 5-OH-56 below:

Table 5-OH-56
Wood County, Ohio Highway/Rail At-Grade Crossings

Grade Crossing	Existing Warning Device	SEA's Preliminary Proposed Mitigation
Range Line Road	Passive[a]	Flashing Lights
Kellogg Road	Passive	Flashing Lights
Washington Street	Passive	Flashing Lights
Tontogony Road	Passive	Flashing Lights
Middletown Pike	Passive	Flashing Lights
Fire Point Road	Passive	Flashing Lights
Roachton Road	Passive	Flashing Lights
Eckel Junction Road	Passive	Flashing Lights
Eckel Road (#155819H)	Passive	Flashing Lights
Eckel Road (#155820C)	Passive	Flashing Lights
W. Boundary Street	Gate	Further Study Required
Ford Road	Passive	Flashing Lights
Bates Road	Passive	Flashing Lights
Schrick Road	Passive	Flashing Lights

[a] Passive generally includes crossbucks, stop signs and railroad pavement markings.

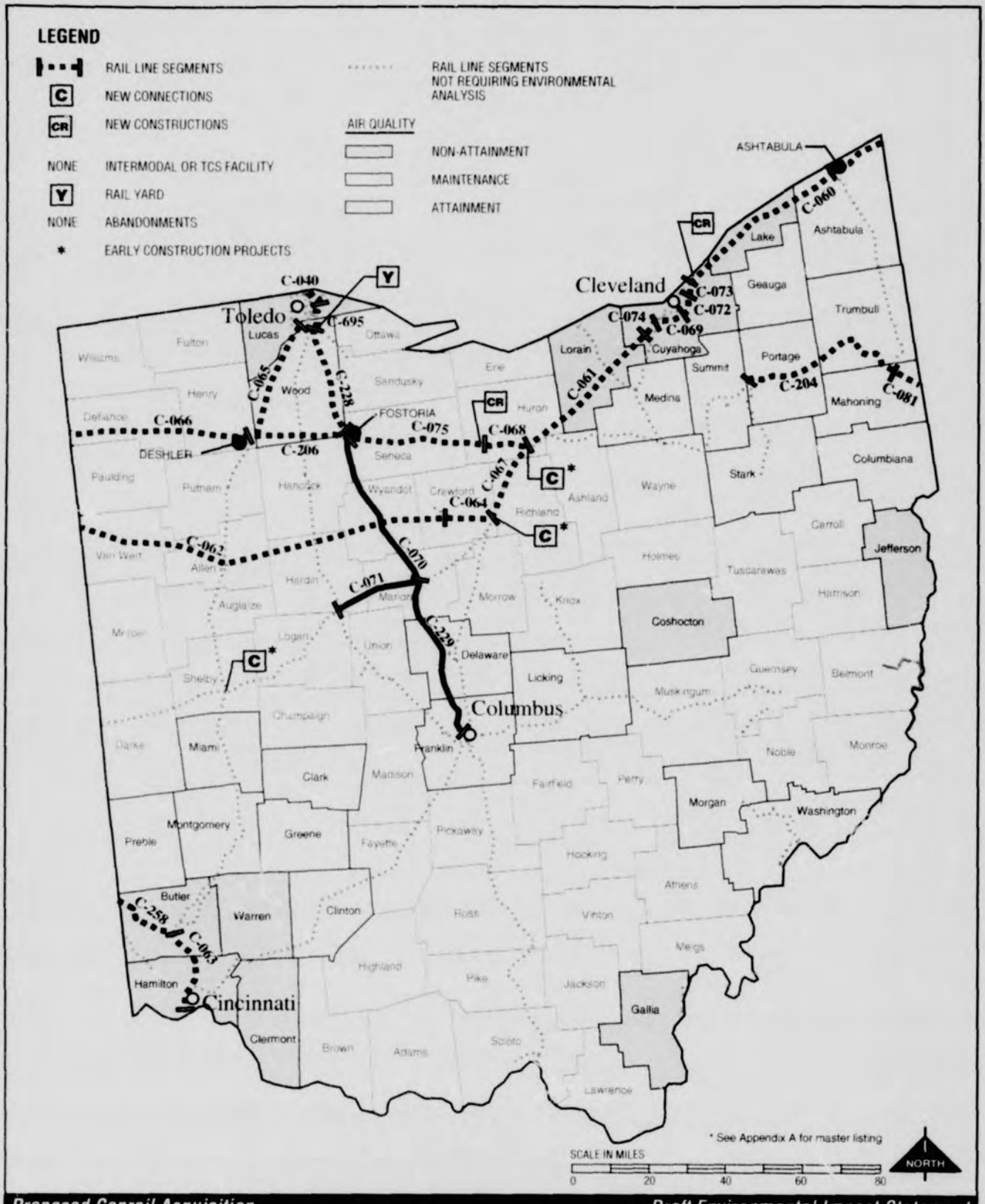

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FIGURE 5-OH-1a

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

OHIO - CSX

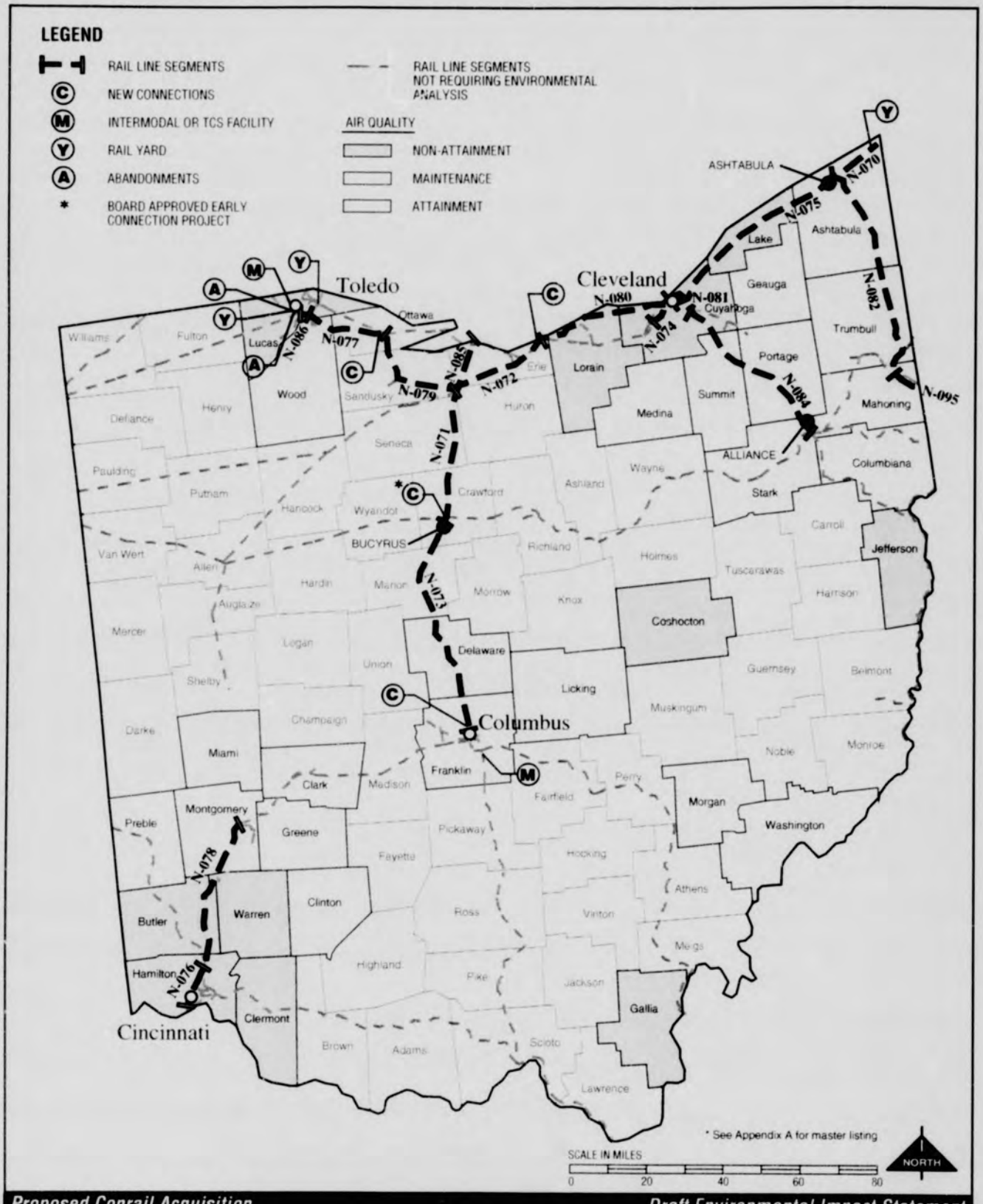

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FIGURE 5-OH-1b

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

OHIO - NORFOLK SOUTHERN

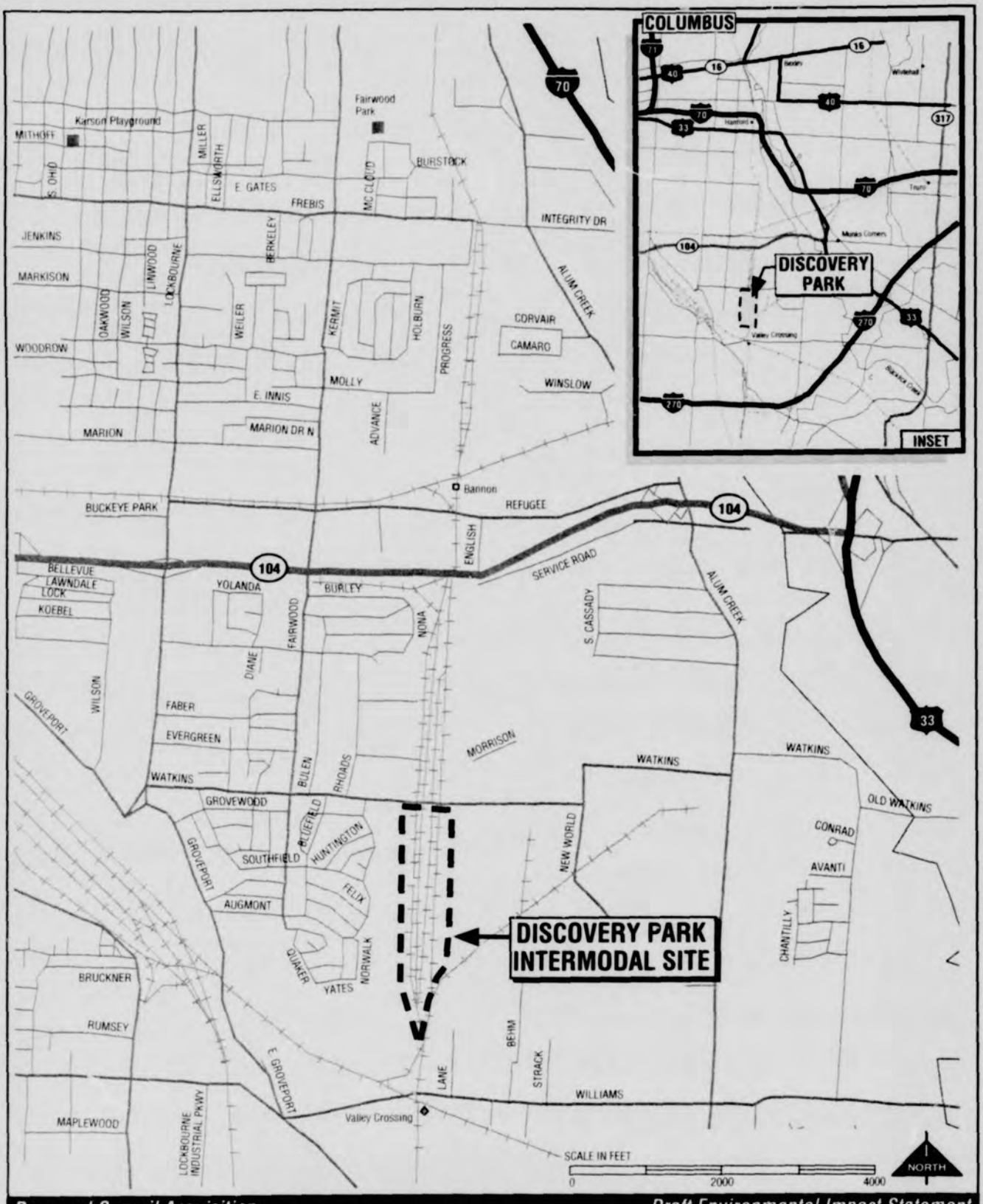

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FIGURE 5-OH-2

DISCOVERY PARK INTERMODAL SITE, COLUMBUS, OHIO

NORFOLK SOUTHERN

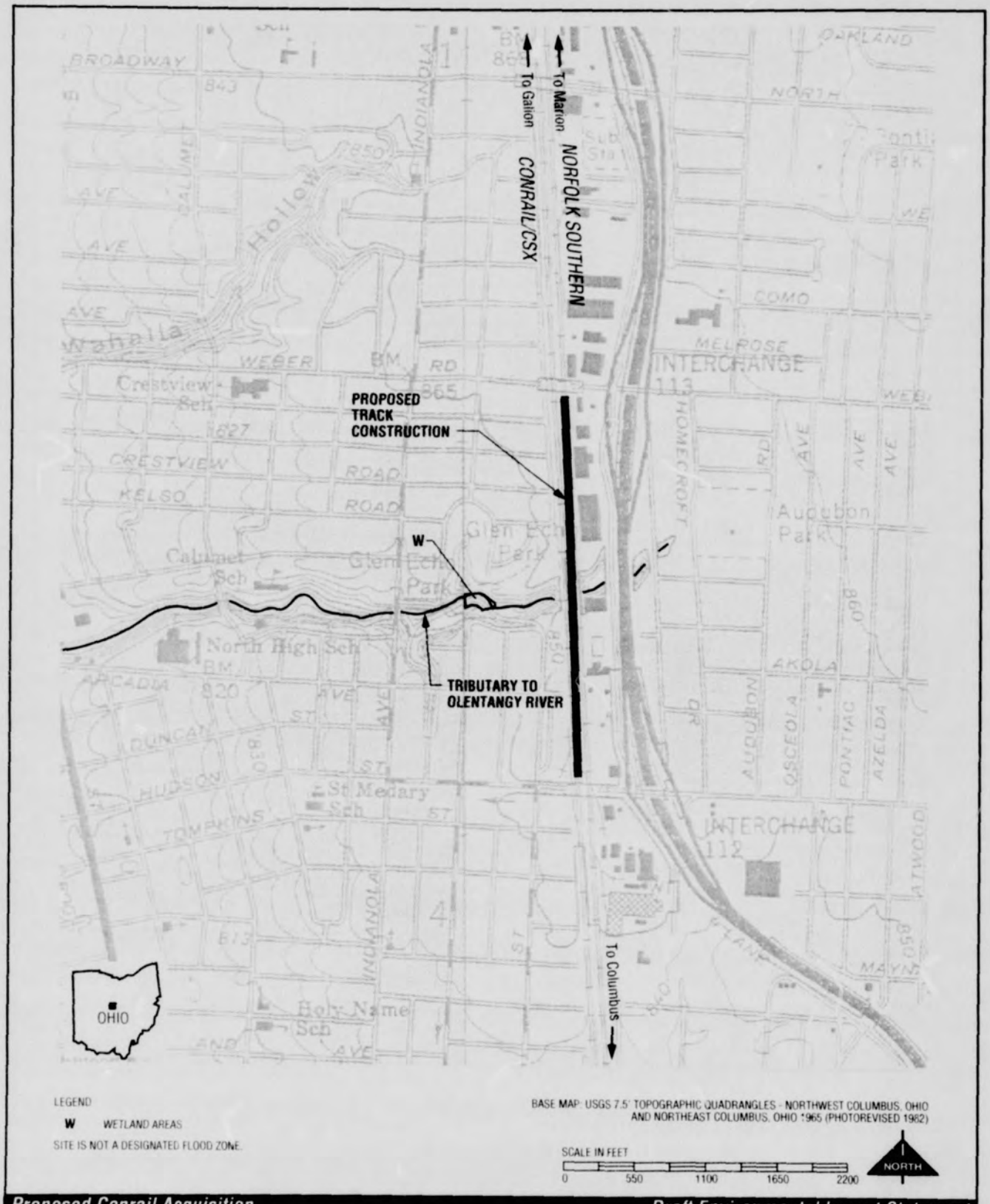

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FIGURE 5-OH-3

COLUMBUS, FRANKLIN COUNTY, OHIO
NORFOLK SOUTHERN

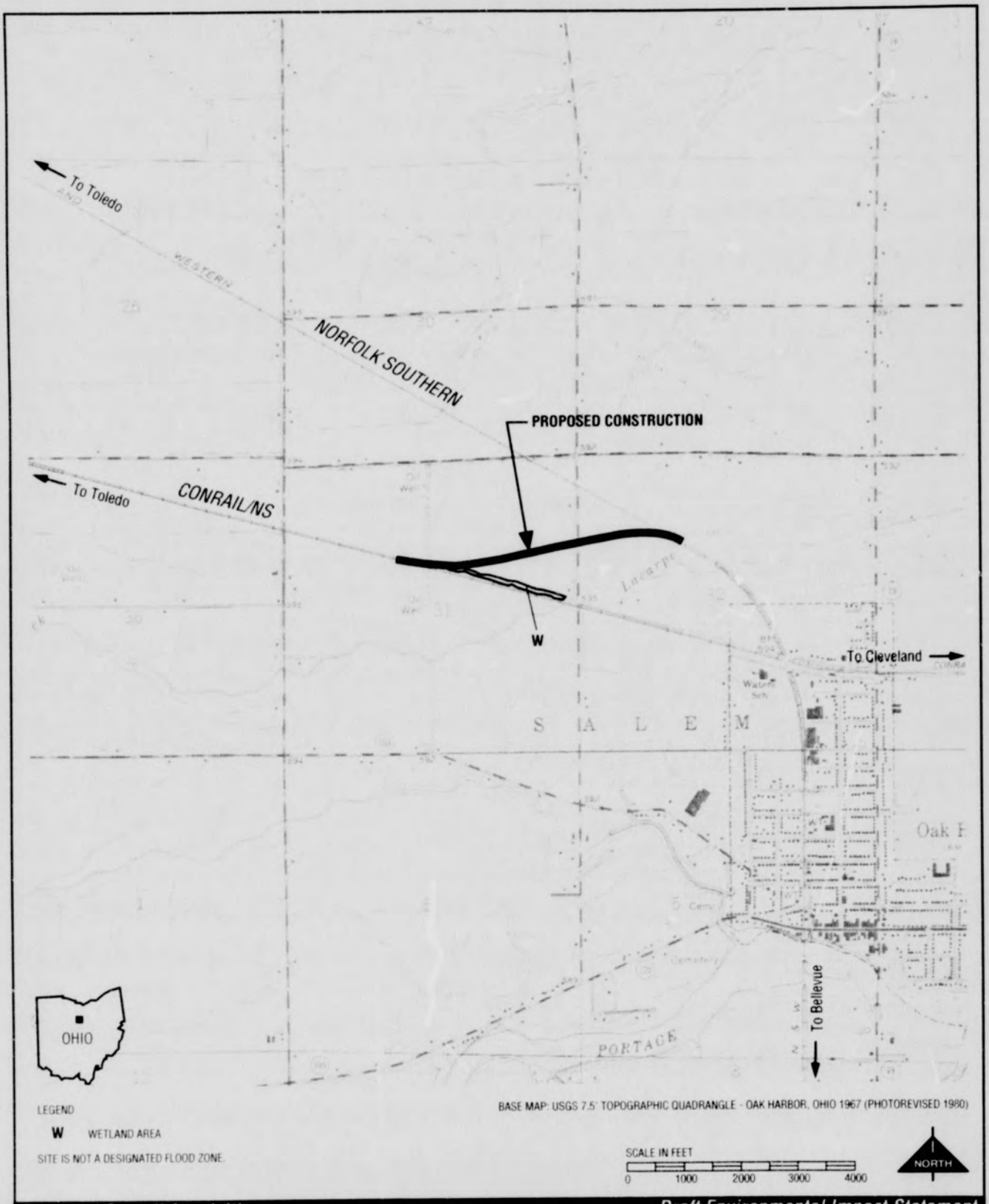

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FIGURE 5-OH-4

OAK HARBOR, OTTAWA COUNTY, OHIO
NORFOLK SOUTHERN

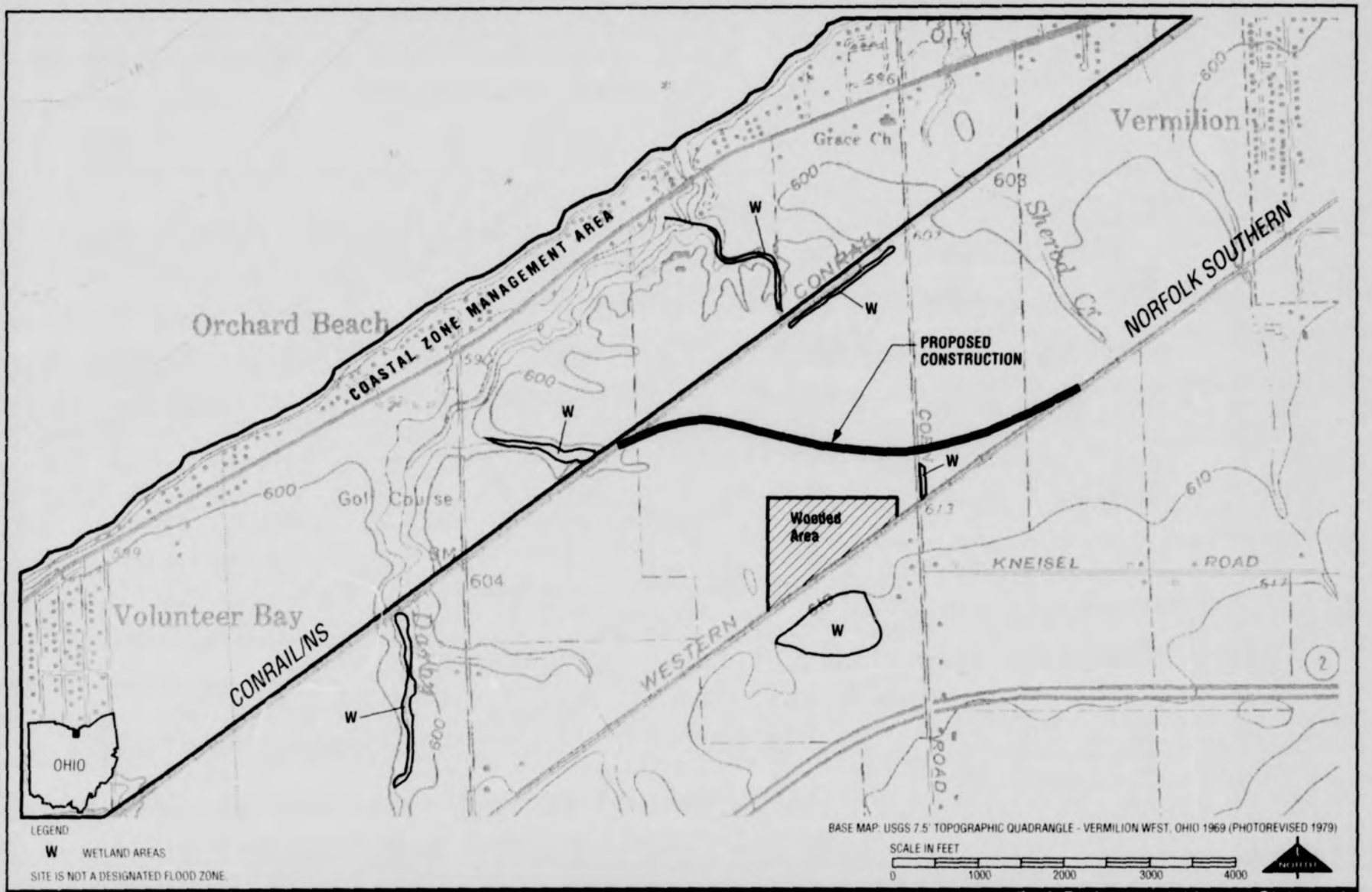

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FIGURE 5-OH-5

VERMILION, ERIE COUNTY, OHIO
NORFOLK SOUTHERN

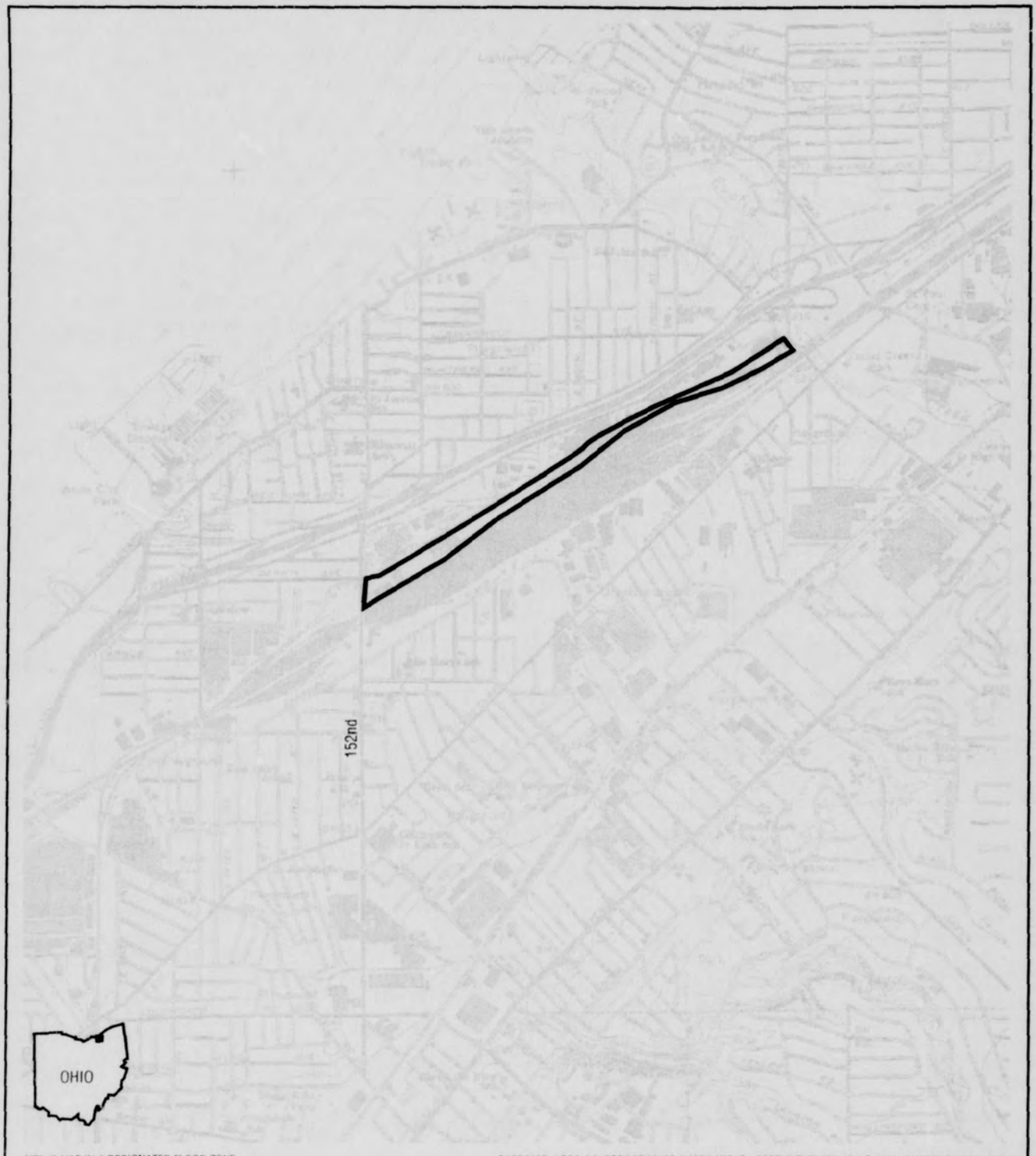

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FIGURE 5-OH-6

COLLINWOOD YARD, CUYAHOGA COUNTY, OHIO
CSX

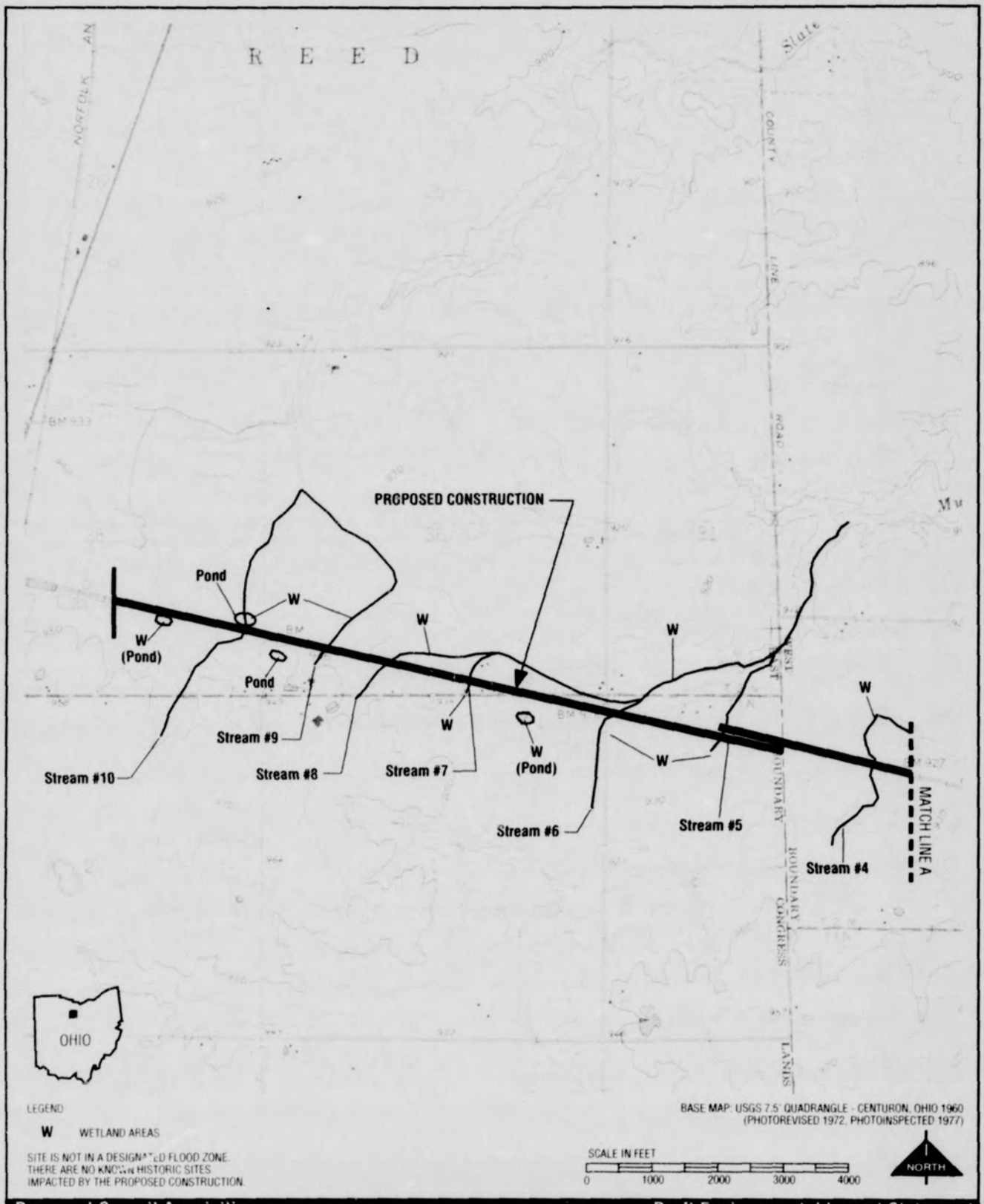
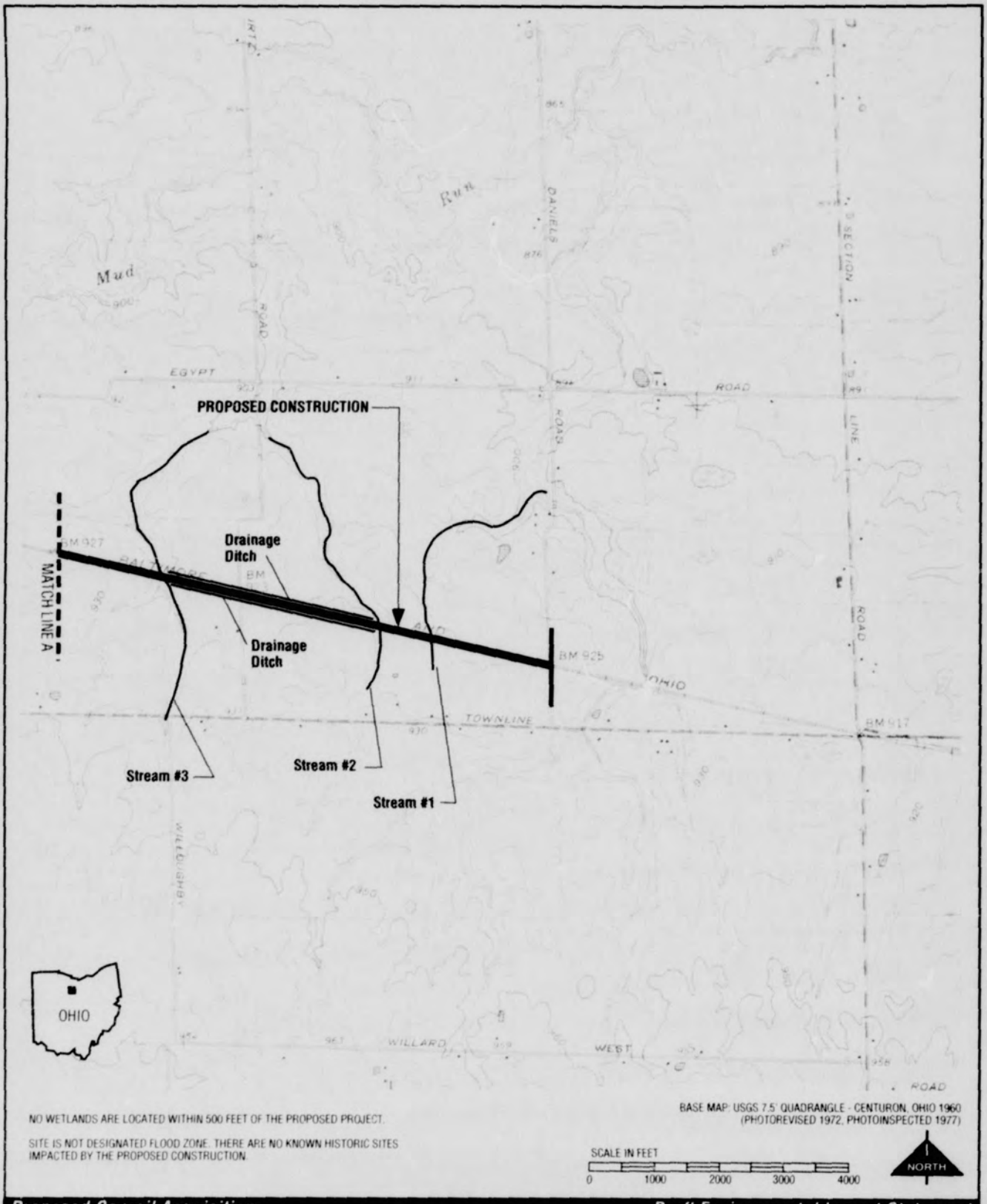


FIGURE 5-OH-7a

WILLARD, HURON/SENECA COUNTIES, OHIO
CSX



NO WETLANDS ARE LOCATED WITHIN 500 FEET OF THE PROPOSED PROJECT.

SITE IS NOT DESIGNATED FLOOD ZONE. THERE ARE NO KNOWN HISTORIC SITES IMPACTED BY THE PROPOSED CONSTRUCTION.

BASE MAP: USGS 7.5' QUADRANGLE - CENTURON, OHIO 1960
(PHOTOREVISED 1972, PHOTOINSPECTED 1977)

SCALE IN FEET
0 1000 2000 3000 4000

NORTH

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FIGURE 5-OH-7b

WILLARD, HURON/SENECA COUNTIES, OHIO
CSX

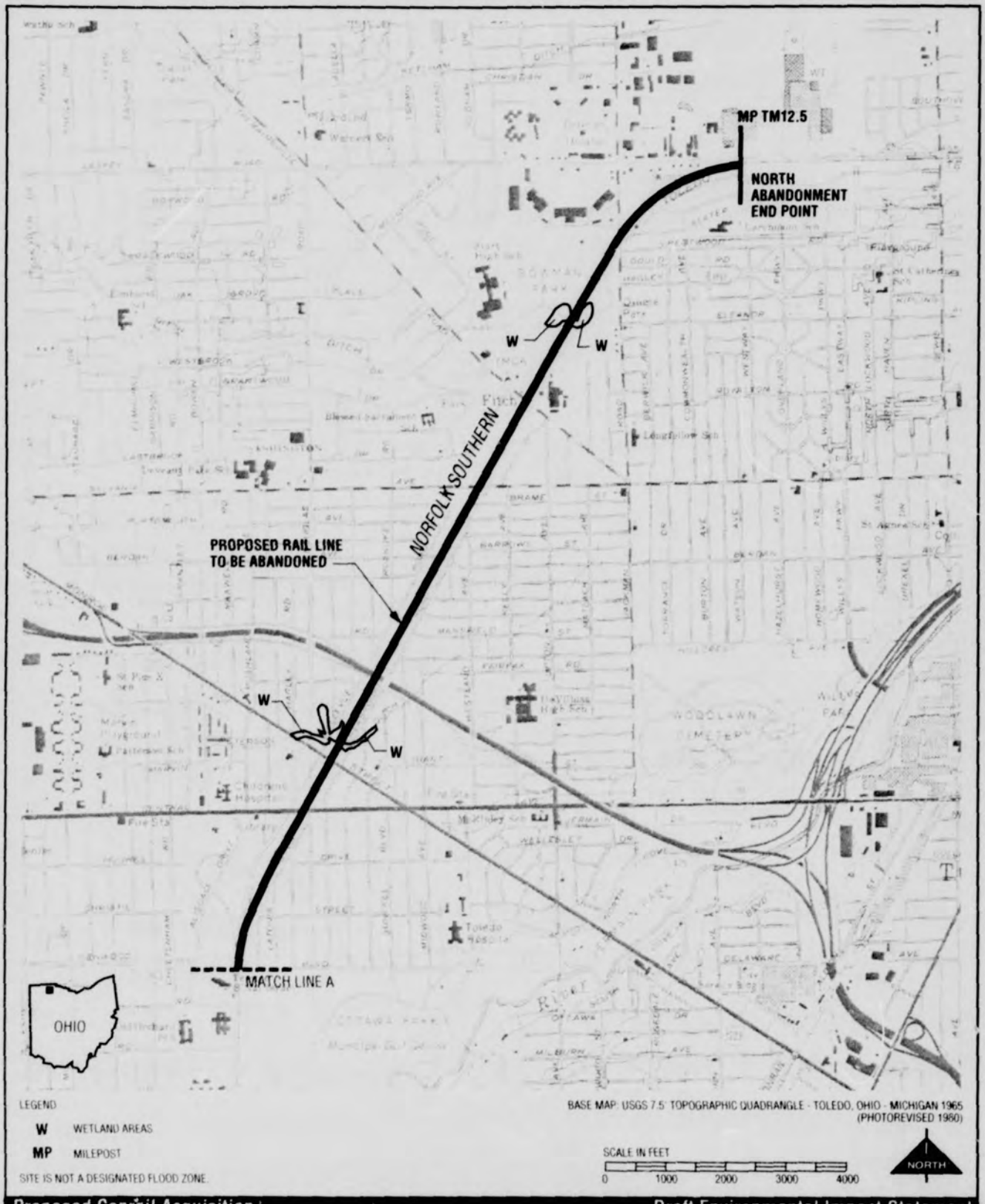

FIGURE 5-OH-8a

TOLEDO TO MAUMEE ABANDONMENT, LUCAS COUNTY, OHIO
NORFOLK SOUTHERN

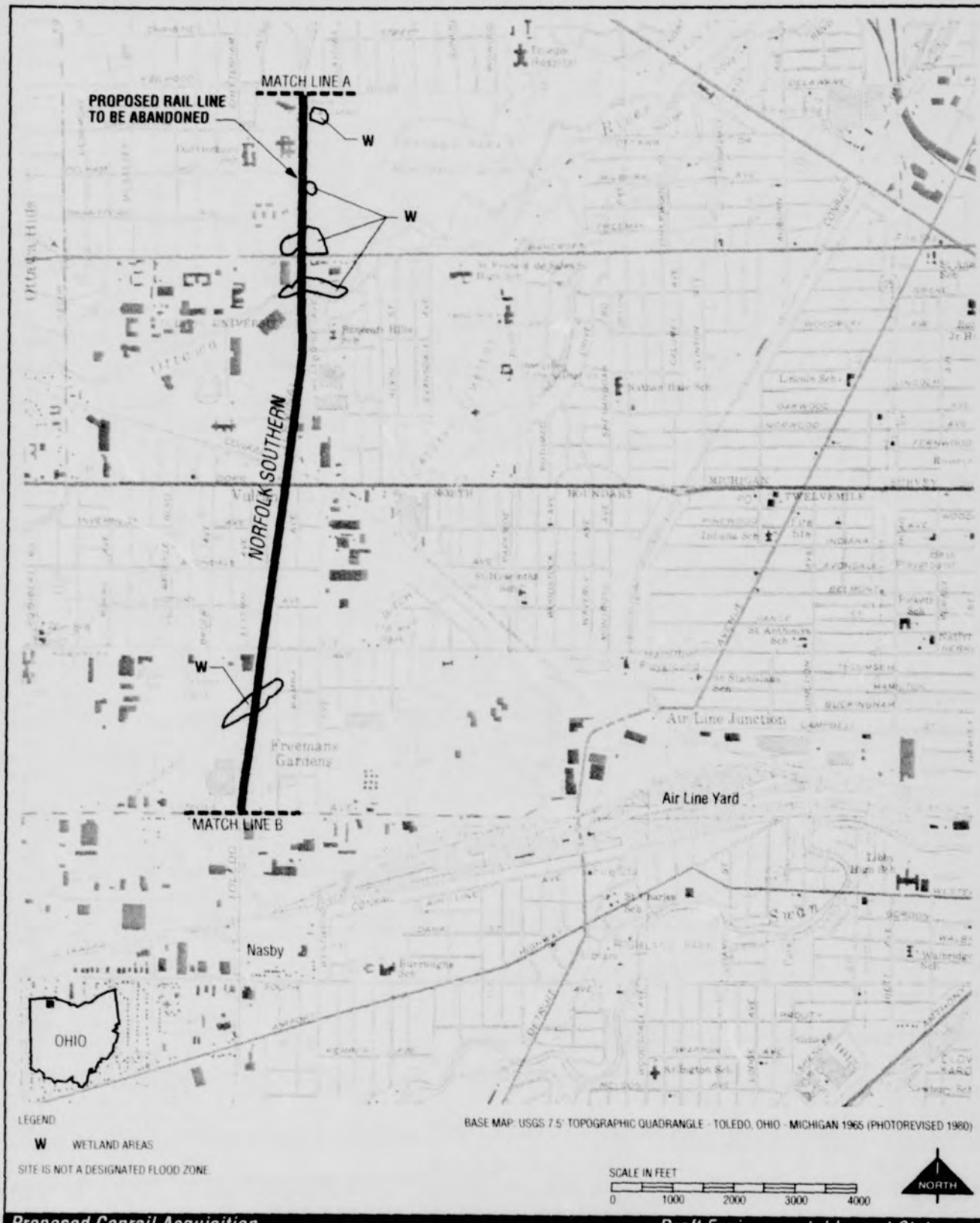

FIGURE 5-OH-8b

TOLEDO TO MAUMEE ABANDONMENT, LUCAS COUNTY, OHIO
NORFOLK SOUTHERN

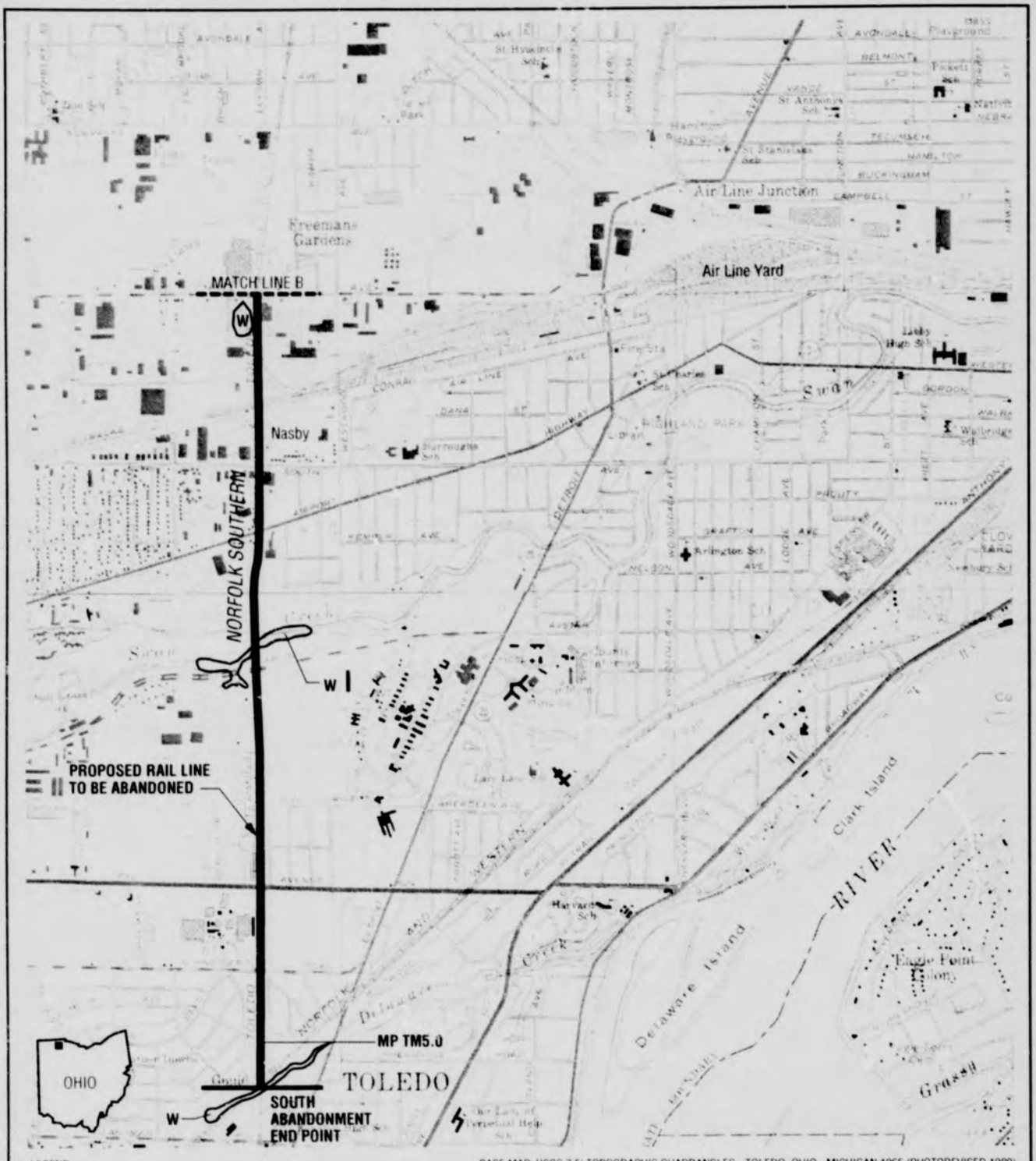

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FIGURE 5-OH-8c

TOLEDO TO MAUMEE ABANDONMENT, LUCAS COUNTY, OHIO
NORFOLK SOUTHERN

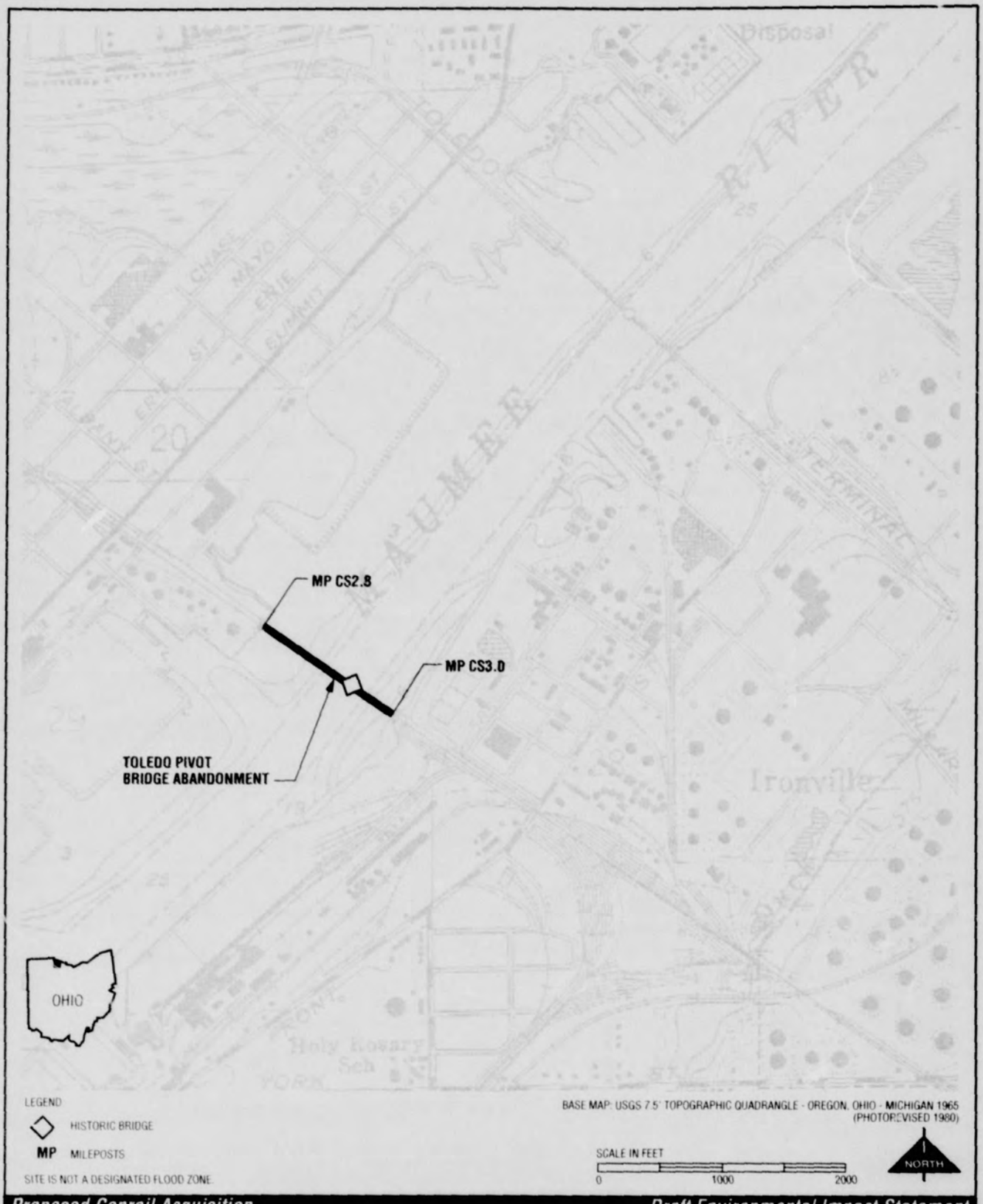

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FIGURE 5-OH-9

PIVOT BRIDGE ABANDONMENT, TOLEDO, LUCAS COUNTY, OHIO
NORFOLK SOUTHERN

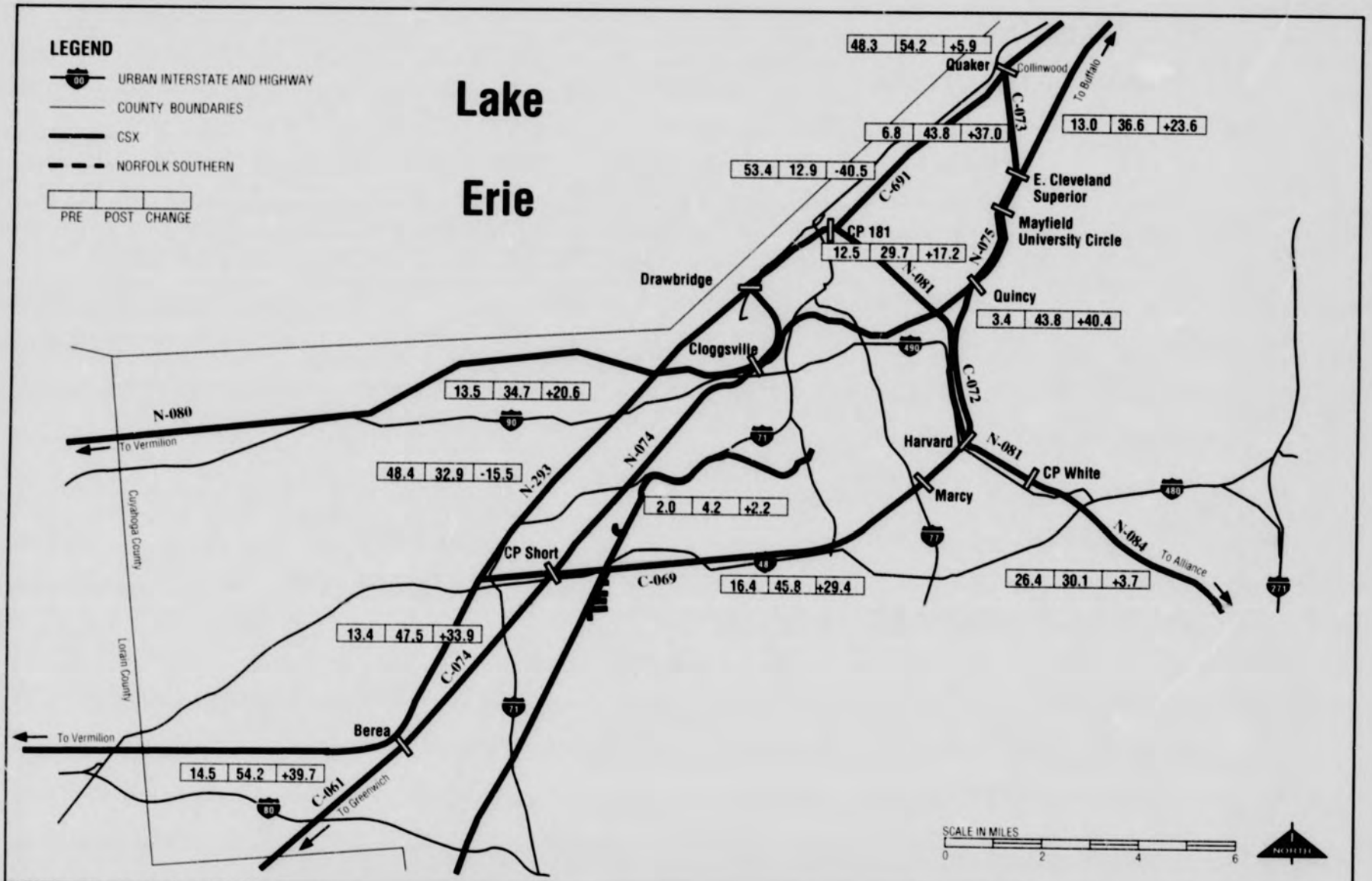

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FIGURE 5-OH-10

CLEVELAND AREA MAP

CLEVELAND, OHIO

Table 5-OH-8
Ohio
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
ALLEN	C-062	532685B	BENTLEY ROAD	Passive	160	2	50	0	5.9	13.9	0.0385	0.0538	0.0153	
ALLEN	C-062	532686H	PEVEE ROAD	Passive	160	2	50	0	5.9	13.9	0.0385	0.0538	0.0153	
ALLEN	C-062	532688W	LAFAYETTE ROAD	Passive	570	2	50	2	5.9	13.9	0.2064	0.2530	0.0466	0.0124
ALLEN	C-062	532689D	SHRIDER ROAD	Passive	40	2	50	0	5.9	13.9	0.0254	0.0370	0.0116	
ALLEN	C-062	532690X	VINT RD	Passive	10	1	50	0	5.9	13.9	0.0085	0.0132	0.0046	
ALLEN	C-062	532691E	PHLLPS RD	Passive	360	2	50	0	5.9	13.9	0.0480	0.0651	0.0171	
ALLEN	C-062	532692L	S HIGH ST	Flasher	920	2	50	0	5.9	13.9	0.0208	0.0299	0.0091	
ALLEN	C-062	532693T	CHURCH ST	Flasher	50	2	50	0	5.9	13.9	0.0070	0.0106	0.0036	
ALLEN	C-062	532694A	WASHINGTON ST	Flasher	1,150	2	50	0	5.9	13.9	0.0224	0.0321	0.0097	
ALLEN	C-062	532695G	RUMBAUGH ROAD	Passive	450	2	50	0	5.9	13.9	0.0509	0.0684	0.0175	
ALLEN	C-062	532696N	FISHER ROAD	Passive	50	2	50	0	5.9	13.9	0.0273	0.0395	0.0122	
ALLEN	C-062	532697V	MCCLURE CROSSING	Gate	280	2	50	0	5.9	13.9	0.0090	0.0129	0.0040	
ALLEN	C-062	532698C	COOL ROAD	Passive	520	2	50	0	5.9	13.9	0.0528	0.0706	0.0178	
ALLEN	C-062	532699J	THAYER ROAD	Passive	460	2	50	0	5.9	13.9	0.0512	0.0687	0.0176	
ALLEN	C-062	532700B	FETTER RD	Gate	950	2	50	0	5.9	13.9	0.0125	0.0178	0.0053	
ALLEN	C-062	532701H	METZGER ROAD	Passive	150	2	50	0	5.9	13.9	0.0378	0.0529	0.0151	
ALLEN	C-062	532703W	ROUSH CROSSING	Gate	7,260	2	50	0	5.9	13.9	0.0211	0.0292	0.0081	
ALLEN	C-062	532706S	N PINE ST	Flasher	2,720	2	35	0	5.9	13.9	0.0299	0.0416	0.0117	
ALLEN	C-062	532707Y	N JACKSON ST	Gate	6,200	2	35	0	5.9	13.9	0.0236	0.0324	0.0088	
ALLEN	C-062	532710G	MAIN ST	Gate	8,860	4	35	0	5.9	13.9	0.0279	0.0377	0.0098	
ALLEN	C-062	532711N	N ELIZABETH ST	Flasher	3,390	2	35	0	5.9	13.9	0.0321	0.0443	0.0122	
ALLEN	C-062	532712V	N WEST ST	Flasher	3,450	2	35	0	5.9	13.9	0.0322	0.0445	0.0123	
ALLEN	C-062	532713C	N MCDONEL ST	Flasher	2,790	2	35	0	5.9	13.9	0.0349	0.0477	0.0128	
ALLEN	C-062	532714J	N METCALF ST	Gate	7,850	2	35	0	5.9	13.9	0.0215	0.0297	0.0082	
ALLEN	C-062	532715R	N BAXTER ST	Flasher	2,420	2	35	0	5.9	13.9	0.0288	0.0402	0.0114	
ALLEN	C-062	532719T	COLE ST	Gate	7,300	2	35	0	5.9	13.9	0.0211	0.0292	0.0081	
ALLEN	C-062	532720M	CABLE ROAD	Gate	18,680	5	50	0	5.9	13.9	0.0367	0.0483	0.0115	
ALLEN	C-062	532721U	HARTZLER RD	Passive	240	2	50	0	5.9	13.9	0.0431	0.0593	0.0162	
ALLEN	C-062	532722B	EASTTOWN ROAD	Gate	12,300	2	60	1	5.9	13.9	0.0757	0.0930	0.0173	
ALLEN	C-062	532723H	EAST ROAD	Gate	3,810	2	50	0	5.9	13.9	0.0179	0.0251	0.0071	
ALLEN	C-062	532724P	BATY ROAD	Gate	2,140	2	50	0	5.9	13.9	0.0155	0.0218	0.0063	
ALLEN	C-062	532726D	DUTCH HOLLOW	Flasher	4,810	2	50	0	5.9	13.9	0.0357	0.0487	0.0130	
ALLEN	C-062	532727K	PIQUAD RD	Flasher	2,420	2	50	0	5.9	13.9	0.0288	0.0402	0.0114	
ALLEN	C-062	532728S	OLD WAPAK ROAD	Gate	240	2	50	2	5.9	13.9	0.0760	0.0860	0.0099	
ALLEN	C-062	532730T	KEMP ROAD	Gate	500	2	50	1	5.9	13.9	0.0457	0.0540	0.0082	
ALLEN	C-062	532733N	GRUBB RD	Passive	330	2	50	1	5.9	13.9	0.1175	0.1479	0.0305	
ALLEN	C-062	532735C	REDD ROAD	Passive	110	2	50	0	5.9	13.9	0.0346	0.0489	0.0143	
ALLEN	C-062	532736J	STATE RD	Passive	700	2	50	0	5.9	13.9	0.0568	0.0750	0.0182	
ALLEN	C-062	532737R	OLD DELPHOS RD	Flasher	530	2	50	0	5.9	13.9	0.0171	0.0249	0.0078	

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ALLEN	C-062	532738X	DEFIANCE TRAIL	Passive	320	2	50	0	5.9	13.9	0.0466	0.0634	0.0169	
ALLEN	C-062	532739E	BAUGH RD	Passive	20	2	50	0	5.9	13.9	0.0204	0.0302	0.0098	
ALLEN	C-062	532740Y	PELTIER RD	Passive	80	2	50	0	5.9	13.9	0.0314	0.0449	0.0135	
ALLEN	C-062	532741F	LEHMAN RD	Gate	1,400	2	50	0	5.9	13.9	0.0138	0.0196	0.0058	
ALLEN	C-062	532743U	PIERCE ST	Flasher	2,900	2	50	0	5.9	13.9	0.0305	0.0424	0.0119	
ALLEN	C-062	532744B	FRANKLIN ST	Flasher	3,520	2	40	0	5.9	13.9	0.0325	0.0448	0.0123	
ALLEN	C-062	532745H	S MAIN ST	Gate	3,240	4	40	0	5.9	13.9	0.0219	0.0302	0.0083	
ASHTABULA	N-070	471951A	THOMPSON ROAD	Passive	30	2	60	0	13.0	25.1	0.0207	0.0281	0.0074	
ASHTABULA	N-070	471952G	WOODWORTH ROAD	Passive	320	2	60	0	13.0	25.1	0.0635	0.0779	0.0144	
ASHTABULA	N-070	471953N	HARBOR STREET	Gate	2,970	2	60	0	13.0	25.1	0.0223	0.0286	0.0063	
ASHTABULA	N-070	471956J	SANDUSKY STREET	Gate	820	2	60	0	13.0	25.1	0.0167	0.0217	0.0050	
ASHTABULA	N-070	471957R	MILL STREET	Gate	4,270	2	20	0	13.0	25.1	0.0243	0.0311	0.0067	
ASHTABULA	N-070	471958X	CHESTNUT STREET	Gate	2,290	2	20	0	13.0	25.1	0.0209	0.0269	0.0060	
ASHTABULA	N-070	471960Y	PARISH BOULEVARD	Gate	2,590	2	60	0	13.0	25.1	0.0207	0.0267	0.0060	
ASHTABULA	N-070	471961F	GORE ROAD	Gate	810	2	60	0	13.0	25.1	0.0160	0.0209	0.0049	
ASHTABULA	N-070	471964B	NO AMBOY RD	Gate	740	2	60	2	13.0	25.1	0.0924	0.1043	0.0119	
ASHTABULA	N-070	471968D	REED ROAD	Gate	390	2	60	0	13.0	25.1	0.0132	0.0174	0.0042	
ASHTABULA	N-070	471972T	LAKE STREET	Gate	5,500	2	60	0	13.0	25.1	0.0259	0.0329	0.0070	
ASHTABULA	N-070	471973A	INFIRMARY ROAD	Gate	390	2	60	0	13.0	25.1	0.0132	0.0174	0.0042	
ASHTABULA	N-070	471975N	BLAKE ROAD	Gate	1,480	2	60	0	13.0	25.1	0.0187	0.0243	0.0055	
ASHTABULA	N-070	471979R	STATE AVENUE	Gate	380	2	35	0	13.0	25.1	0.0132	0.0173	0.0041	
ASHTABULA	N-070	471980K	DWIGHT AVENUE	Flasher	180	2	35	0	13.0	25.1	0.0162	0.0218	0.0056	
ASHTABULA	N-070	471983Y	MAIN ST	Flasher	5,350	4	35	0	13.0	25.1	0.0162	0.0218	0.0056	
ASHTABULA	N-070	471984F	PARK ST	Gate	4,290	2	35	0	13.0	25.1	0.0244	0.0311	0.0067	
ASHTABULA	N-075	471985U	GARY AVENUE	Gate	810	2	35	1	13.0	36.6	0.0557	0.0705	0.0148	
ASHTABULA	N-075	471986B	JEFFERSON AVENUE	Flasher	1,180	2	35	0	13.0	36.6	0.0309	0.0457	0.0148	
ASHTABULA	N-075	471988P	WEST 52ND STREET	Flasher	2,590	2	35	1	13.0	36.6	0.0985	0.1287	0.0301	
ASHTABULA	N-075	471989W	WEST AVENUE	Gate	8,000	2	35	0	13.0	36.6	0.0282	0.0405	0.0123	
ASHTABULA	N-075	471990R	NATHAN AVENUE	Flasher	1,310	2	35	1	13.0	36.6	0.0852	0.1124	0.0272	
ASHTABULA	N-075	471991X	SAMUEL AVENUE	Flasher	300	2	60	0	13.0	36.6	0.0195	0.0304	0.0109	
ASHTABULA	N-075	471992E	WOODMAN AVENUE	Gate	4,330	2	60	1	13.0	36.6	0.0708	0.0909	0.0201	
ASHTABULA	N-075	471993L	SANBORNE ROAD	Flasher	960	2	60	1	13.0	36.6	0.0798	0.1054	0.0256	
ASHTABULA	N-075	471997N	STATE ROUTE 45	Gate	4,930	2	60	0	13.0	36.6	0.0252	0.0366	0.0114	
ASHTABULA	N-075	471998V	DEPOT ROAD	Flasher	340	2	60	1	13.0	36.6	0.0644	0.0846	0.0202	
ASHTABULA	N-075	472001J	BROWN ROAD	Passive	170	2	60	0	13.0	36.6	0.0547	0.0767	0.0221	
ASHTABULA	N-075	472004E	MYERS ROAD	Gate	740	2	60	0	13.0	36.6	0.0157	0.0237	0.0080	
ASHTABULA	N-075	472005L	CENTENNIAL ROAD	Gate	2,020	2	60	0	13.0	36.6	0.0202	0.0301	0.0098	
ASHTABULA	N-075	472007A	SHERMAN STREET	Gate	2,110	2	60	0	13.0	36.6	0.0205	0.0304	0.0099	
ASHTABULA	N-075	472008G	BROADWAY AVENUE	Gate	7,320	2	60	0	13.0	36.6	0.0277	0.0398	0.0121	

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ASHTABULA	N-075	472009N	EAGLE AVENUE	Flasher	1,400	2	60	0	13.0	36.6	0.0326	0.0479	0.0153	
ASHTABULA	N-075	472010H	CHESTNUT STREET	Gate	120	2	60	1	13.0	36.6	0.0442	0.0538	0.0096	
ASHTABULA	N-075	472011P	WEST STREET	Gate	260	2	60	0	13.0	36.6	0.0119	0.0183	0.0064	
ASHTABULA	N-075	472012W	WALTER MAIN RD	Passive	230	2	60	1	13.0	36.6	0.1388	0.1794	0.0405	0.0155
ASHTABULA	N-082	502651A	STATE	Gate	1,38	2	30	0	11.7	23.8	0.0203	0.0267	0.0064	
ASHTABULA	N-082	503107T	PLYMOUTH	Flasher	290	2	30	0	11.7	23.8	0.0218	0.0294	0.0077	
ASHTABULA	N-082	503108A	CARSON RD	Gate	250	2	40	0	11.7	23.8	0.0130	0.0175	0.0045	
ASHTABULA	N-082	503110B	MEANEY RD/MORGAN	Passive	240	2	40	0	11.7	23.8	0.0530	0.0677	0.0147	
ASHTABULA	N-082	503113W	SR167	Flasher	1,050	2	40	0	11.7	23.8	0.0287	0.0380	0.0093	
ASHTABULA	N-082	503114D	MARCH RD	Passive	30	2	40	0	11.7	23.8	0.0174	0.0243	0.0070	
ASHTABULA	N-082	503115K	NETCHER	Passive	70	2	40	0	11.7	23.8	0.0229	0.0316	0.0087	
ASHTABULA	N-082	503116S	CLAY RD	Passive	50	2	40	0	11.7	23.8	0.0205	0.0285	0.0080	
ASHTABULA	N-082	503117Y	S DENMARK RD	Passive	400	2	40	0	11.7	23.8	0.0590	0.0743	0.0153	
ASHTABULA	N-082	503118F	TOWER RD	Passive	250	2	40	0	11.7	23.8	0.0526	0.0673	0.0147	
ASHTABULA	N-082	503119M	FOOTVILLE RI	Flasher	820	2	40	0	11.7	23.8	0.0264	0.0353	0.0088	
ASHTABULA	N-082	503120G	SR 193	Flasher	930	2	40	0	11.7	23.8	0.0276	0.0366	0.0091	
ASHTABULA	N-082	503121N	MARRIAN RD	Passive	60	2	40	0	11.7	23.8	0.0357	0.0477	0.0119	
ASHTABULA	N-082	503122V	AYERS RD	Passive	30	2	40	0	11.7	23.8	0.0174	0.0243	0.0070	
ASHTABULA	N-082	503124J	US 6	Flasher	810	2	40	0	11.7	23.8	0.0263	0.0351	0.0088	
ASHTABULA	N-082	503125R	DODGEVILLE RD/MANN RD	Passive	20	2	40	0	11.7	23.8	0.0152	0.0214	0.0062	
ASHTABULA	N-082	503126X	WOODWORTH RD	Passive	10	2	40	0	11.7	23.8	0.0120	0.0171	0.0051	
ASHTABULA	N-082	503127E	MEADVILLE RD (US 322)	Gate	1,260	2	40	0	11.7	23.8	0.0174	0.0231	0.0057	
ASHTABULA	N-082	503128L	UNDERWOOD RD	Passive	60	2	40	0	11.7	23.8	0.0357	0.0477	0.0119	
ASHTABULA	N-082	544582K	W 54TH ST	Gate	1,460	2	20	0	11.7	23.8	0.0206	0.0270	0.0065	
ASHTABULA	N-082	544595L	W 52ND ST	Gate	1,810	2	25	0	11.7	23.8	0.0217	0.0284	0.0067	
ASHTABULA	N-082	544908Y	WEST 32ND ST	Flasher	2,397	2	25	0	11.7	23.8	0.0376	0.0485	0.0109	
CRAWFORD	C-062	532580M	LANE ST	Gate	3,250	2	40	0	5.9	13.9	0.0217	0.0300	0.0083	
CRAWFORD	C-062	532581U	WALNUT ST	Flasher	3,960	2	40	0	5.9	13.9	0.0388	0.0523	0.0135	
CRAWFORD	C-062	532582B	ALLEY	Flasher	160	1	40	0	5.9	13.9	0.0111	0.0165	0.0055	
CRAWFORD	C-062	532583H	N SANDUSKY AVE	Flasher	9,710	2	40	0	5.9	13.9	0.0499	0.0647	0.0149	
CRAWFORD	C-062	532584P	ALLEY	Flasher	120	1	40	0	5.9	13.9	0.0099	0.0149	0.0050	
CRAWFORD	C-062	532585W	POPLAR ST	Flasher	3,770	2	40	1	5.9	13.9	0.0966	0.1207	0.0242	
CRAWFORD	C-062	532586D	SPRING ST	Flasher	2,990	2	40	0	5.9	13.9	0.0357	0.0486	0.0130	
CRAWFORD	C-062	532587K	SEARS ST	Flasher	570	1	60	1	5.9	13.9	0.0595	0.0740	0.0145	
CRAWFORD	C-062	532588S	MANSFIELD ST	Flasher	8,480	2	40	0	5.9	13.9	0.0481	0.0628	0.0147	
CRAWFORD	C-062	532590T	MCCRACKEN	Gate	350	1	60	0	5.9	13.9	0.0083	0.0121	0.0037	
CRAWFORD	C-062	532591A	SIMMS CR	Passive	70	1	60	0	5.9	13.9	0.0178	0.0266	0.0088	

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CRAWFORD	C-062	532594V	GLENVILLE CR	Passive	160	2	60	0	5.9	13.9	0.0408	0.0566	0.0158	
CRAWFORD	C-062	532596J	STRIEB CR-KNAUSS	Passive	70	2	60	0	5.9	13.9	0.0322	0.0458	0.0137	
CRAWFORD	C-062	532597R	MARION-MELMORE RD	Flasher	440	2	60	0	5.9	13.9	0.0189	0.0274	0.0085	
CRAWFORD	C-064	502674G	WHETSTONE ST	Gate	3,840	2	60	0	6.5	14.5	0.0245	0.0329	0.0084	
CRAWFORD	C-064	502676V	ALBRIGHT	Passive	180	2	60	0	6.5	14.5	0.0445	0.0600	0.0154	
CRAWFORD	C-064	502677C	LOWER LEESVILLE	Flasher	970	2	60	0	6.5	14.5	0.0262	0.0362	0.0100	
CRAWFORD	C-064	502679R	OLENTANGY RD	Passive	70	2	60	0	6.5	14.5	0.0341	0.0474	0.0132	
CRAWFORD	C-064	502680K	MAIN ST	Flasher	1,890	2	60	0	6.5	14.5	0.0325	0.0439	0.0115	
CRAWFORD	C-064	502681S	BECK RD	Passive	80	2	60	0	6.5	14.5	0.0349	0.0483	0.0134	
CRAWFORD	C-064	502682Y	BIDDLE RD	Passive	170	2	60	2	6.5	14.5	0.1781	0.2175	0.0394	0.0088
CRAWFORD	C-064	502683F	CRESTLINE RD	Gate	740	2	60	0	6.5	14.5	0.0139	0.0193	0.0054	
CRAWFORD	C-064	502684M	SR 598	Gate	3,030	2	60	0	6.5	14.5	0.0176	0.0241	0.0065	
CRAWFORD	C-064	502685U	WILEY ST	Flasher	1,440	2	30	0	6.5	14.5	0.0341	0.0459	0.0118	
CRAWFORD	C-064	502686B	THOMAN ST	Flasher	3,520	2	30	0	6.5	14.5	0.0397	0.0525	0.0128	
CRAWFORD	C-064	502852R	WESTERN AVE	Flasher	150	2	60	0	6.5	14.5	0.0135	0.0195	0.0060	
CRAWFORD	C-067	518441H	BUCYRUS ST	Gate	1,670	2	50	0	14.5	31.3	0.0229	0.0306	0.0077	
CRAWFORD	C-067	518443W	MAIN ST	Gate	12,030	2	50	0	14.5	31.3	0.0371	0.0475	0.0104	
CRAWFORD	C-067	518445K	WASHINGTON	Gate	480	1	60	2	14.5	31.3	0.0921	0.1063	0.0141	
CRAWFORD	N-071	481570N	PLYMOUTH	Gate	2,770	2	60	1	26.0	34.5	0.0798	0.0855	0.0057	
CRAWFORD	N-071	481572C	ANDREWS	Passive	90	1	60	1	26.0	34.5	0.0998	0.1082	0.0083	
CRAWFORD	N-071	481573J	CARRELL	Passive	70	1	60	0	26.0	34.5	0.0345	0.0389	0.0044	
CRAWFORD	N-071	481574R	T-81	Passive	20	1	60	0	26.0	34.5	0.0139	0.0160	0.0021	
CRAWFORD	N-071	481575X	BRANDYWINE	Passive	220	2	60	0	26.0	34.5	0.0738	0.0801	0.0063	
CRAWFORD	N-071	481576E	HIEBER	Passive	60	1	60	0	26.0	34.5	0.0200	0.0229	0.0029	
CRAWFORD	N-071	481578T	LEMERT	Passive	20	1	60	0	26.0	34.5	0.0139	0.0160	0.0021	
CRAWFORD	N-071	481579A	RIDGETON	Gate	270	2	60	0	26.0	34.5	0.0166	0.0187	0.0020	
CRAWFORD	N-071	481580U	BROKEN SWORD	Passive	20	1	60	0	26.0	34.5	0.0139	0.0160	0.0021	
CRAWFORD	N-071	481581B	CAREY	Passive	100	1	60	0	26.0	34.5	0.0383	0.0430	0.0047	
CRAWFORD	N-071	481582H	ORR	Passive	20	1	60	0	26.0	34.5	0.0236	0.0269	0.0033	
CRAWFORD	N-071	481584W	CHATFIELD	Passive	300	2	50	1	26.0	34.5	0.1685	0.1799	0.0114	0.0156
CRAWFORD	N-071	481585D	WASHINGTON/GLADY	Passive	70	1	50	0	26.0	34.5	0.0325	0.0367	0.0042	
CRAWFORD	N-071	481587S	NEW WASHINGTON	Flasher	540	2	60	0	26.0	34.5	0.0371	0.0413	0.0042	
CRAWFORD	N-071	481590A	ALBAUGH	Passive	510	2	60	0	26.0	34.5	0.0865	0.0928	0.0063	
CRAWFORD	N-071	481592N	CRWFRD-SNECA COU	Passive	160	2	60	0	26.0	34.5	0.0690	0.0753	0.0063	
CRAWFORD	N-073	481551J	MONNETTE	Gate	470	2	60	0	26.0	34.3	0.0188	0.0210	0.0022	
CRAWFORD	N-073	481552R	DALLAS TWP 115	Passive	70	1	60	1	26.0	34.3	0.0951	0.1029	0.0078	
CRAWFORD	N-073	481553X	DALLAS TWP 96	Passive	40	1	60	0	26.0	34.3	0.0292	0.0330	0.0038	
CRAWFORD	N-073	481554E	CALDWELL	Passive	90	1	60	1	26.0	34.3	0.0998	0.1080	0.0081	
CRAWFORD	N-073	481556T	MT ZION	Gate	360	2	60	2	26.0	34.3	0.0994	0.1048	0.0054	

Table 5-OH-8
Ohio
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
CRAWFORD	N-073	481557A	SR 98	Gate	2,360	2	60	2	26.0	34.3	0.1262	0.1339	0.0078	
CRAWFORD	N-073	481558G	BEAL	Gate	220	2	60	5	26.0	34.3	0.2117	0.2210	0.0094	
CRAWFORD	N-073	481559N	CHARLOTTE	Gate	3,890	2	60	0	26.0	34.3	0.0312	0.0345	0.0032	
CRAWFORD	N-073	481560H	SOUTHERN	Gate	4,300	2	60	0	26.0	34.3	0.0320	0.0352	0.0033	
CRAWFORD	N-073	481561P	HOPLEY	Gate	6,030	2	60	1	26.0	34.3	0.0903	0.0966	0.0063	
CRAWFORD	N-073	481562W	OAKWOOD	Flasher	290	2	60	0	26.0	34.3	0.0263	0.0295	0.0032	
CRAWFORD	N-073	481563D	WOODLAWN	Flasher	1,851	2	60	1	26.0	34.3	0.1110	0.1192	0.0082	
CRAWFORD	N-073	481564K	WARREN	Flasher	1,059	2	60	0	26.0	34.3	0.0395	0.0437	0.0042	
CRAWFORD	N-073	481565S	RENNSLAER	Flasher	287	2	60	0	26.0	34.3	0.0262	0.0294	0.0032	
CUYAHOGA	C-061	524363S	BAGLEY RD	Gate	10,950	4	60	0	14.5	54.2	0.0449	0.0648	0.0199	
CUYAHOGA	C-061	524364Y	WEST RD	Gate	1,480	2	60	0	14.5	54.2	0.0233	0.0377	0.0144	
CUYAHOGA	C-061	524367U	COLUMBIA RD	Gate	7,240	2	60	1	14.5	54.2	0.0853	0.1167	0.0314	
CUYAHOGA	C-061	524368B	SPRAGUE	Flasher	996	2	60	0	14.5	54.2	0.0369	0.0582	0.0212	
CUYAHOGA	C-074	523971H	HUMMEL ROAD	Gate	5,560	2	30	0	13.4	47.3	0.0312	0.0475	0.0163	
CUYAHOGA	C-074	523973W	ENGLE ROAD	Gate	15,100	4	30	0	13.4	47.3	0.0471	0.0663	0.0193	
CUYAHOGA	C-074	523975K	HOLLAND ROAD	Gate	4,340	2	30	0	13.4	47.3	0.0288	0.0443	0.0156	
CUYAHOGA	C-074	523977Y	FRONT ST	Gate	4,930	2	30	0	13.4	47.3	0.0341	0.0511	0.0171	
CUYAHOGA	N-075	472089J	CHARDON ROAD	Gate	4,770	4	60	0	13.0	36.6	0.0369	0.0512	0.0143	
CUYAHOGA	N-075	472093Y	DILLE ROAD	Gate	15,430	2	60	0	13.0	36.6	0.0386	0.0531	0.0146	
CUYAHOGA	N-075	472097B	WAYSIDE ROAD	Gate	3,770	2	35	0	13.0	36.6	0.0282	0.0406	0.0123	
CUYAHOGA	N-075	472098H	LONDON ROAD	Gate	5,310	2	35	0	13.0	36.6	0.0305	0.0435	0.0129	
CUYAHOGA	N-080	472187A	WEST 110 STREET	Gate	5,970	2	35	0	13.5	34.1	0.0310	0.0426	0.0115	
CUYAHOGA	N-080	472188G	WEST 111 STREET	Flasher	1,520	2	35	0	12.5	34.1	0.0398	0.0548	0.0150	
CUYAHOGA	N-080	472189N	WEST 112 ST	Gate	750	2	35	0	13.5	34.1	0.0188	0.0270	0.0082	
CUYAHOGA	N-080	472190H	WEST 114 STREET	Flasher	370	2	35	0	13.5	34.1	0.0255	0.0371	0.0116	
CUYAHOGA	N-080	472191P	WEST 116 STREET	Flasher	2,570	2	35	0	13.5	34.1	0.0462	0.0621	0.0159	
CUYAHOGA	N-080	472192W	WEST 117 STREET	Gate	15,610	4	35	1	13.5	34.1	0.1106	0.1356	0.0251	
CUYAHOGA	N-080	472194K	HIRD AVE	Gate	2,180	2	35	1	13.5	34.1	0.0658	0.0821	0.0163	
CUYAHOGA	N-080	472195S	FRY	Flasher	770	2	35	0	13.5	34.1	0.0324	0.0458	0.0135	
CUYAHOGA	N-080	472196Y	BEACH AVENUE	Flasher	700	2	35	1	13.5	34.1	0.0843	0.1081	0.0238	
CUYAHOGA	N-080	472197F	COVE AVENUE	Gate	2,920	2	35	0	13.5	34.1	0.0232	0.0328	0.0096	
CUYAHOGA	N-080	472198M	THOREAU AVENUE	Flasher	480	2	35	0	13.5	34.1	0.0278	0.0401	0.0123	
CUYAHOGA	N-080	472199U	NICHOLSON AVENUE	Gate	4,080	2	35	0	13.5	34.1	0.0284	0.0394	0.0109	
CUYAHOGA	N-080	472200L	GIEL AVENUE	Gate	1,990	2	35	0	13.5	34.1	0.0240	0.0338	0.0098	
CUYAHOGA	N-080	472201T	BUNTS RD	Gate	5,300	2	35	0	13.5	34.1	0.0302	0.0416	0.0113	
CUYAHOGA	N-080	472202A	MANOR PARK	Flasher	1,930	2	35	0	13.5	34.1	0.0427	0.0581	0.0154	
CUYAHOGA	N-080	472203G	MARLOWE AVENUE	Flasher	1,460	2	35	0	13.5	34.1	0.0393	0.0542	0.0149	
CUYAHOGA	N-080	472204N	BELLE AVENUE	Gate	4,030	2	35	1	13.5	34.1	0.0779	0.0976	0.0197	
CUYAHOGA	N-080	472205V	ST CHARLES AVENUE	Flasher	1,090	2	35	0	13.5	34.1	0.0361	0.0503	0.0143	

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County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
CUYAHOGA	N-080	472206C	WARREN ROAD	Gate	3,000	2	35	0	13.5	34.1	0.0265	0.0369	0.0104	
CUYAHOGA	N-080	472207J	COOK AVENUE	Gate	2,440	2	35	2	13.5	34.1	0.1192	0.1455	0.0263	
CUYAHOGA	N-080	472208R	GLADYS AVENUE	Flasher	900	2	35	0	13.5	34.1	0.0340	0.0478	0.0138	
CUYAHOGA	N-080	472209X	ANDREWS AVENUE	Gate	1,040	2	35	2	13.5	34.1	0.1069	0.1296	0.0227	
CUYAHOGA	N-080	472210S	LAKELAND AVENUE	Flasher	1,380	2	35	0	13.5	34.1	0.0387	0.0535	0.0148	
CUYAHOGA	N-080	472212F	BROCKLEY AVENUE	Flasher	1,120	2	35	0	13.5	34.1	0.0364	0.0507	0.0143	
CUYAHOGA	N-080	472213M	CRANFORD AVENUE	Flasher	1,070	2	35	0	13.5	34.1	0.0359	0.0501	0.0142	
CUYAHOGA	N-080	472214U	WESTLAKE AVE	Flasher	720	2	35	1	13.5	34.1	0.0848	0.1087	0.0240	
CUYAHOGA	N-080	472215B	HALL AVENUE	Flasher	670	2	35	0	13.5	34.1	0.0310	0.0441	0.0131	
CUYAHOGA	N-080	472216H	ETHEL AVENUE	Flasher	960	2	35	1	13.5	34.1	0.0902	0.1153	0.0252	
CUYAHOGA	N-080	472217P	EDWARDS AVENUE	Flasher	1,150	2	35	1	13.5	34.1	0.0937	0.1196	0.0259	
CUYAHOGA	N-080	472218W	BONNIEVIEW AVENUE	Flasher	1,330	2	35	1	13.5	34.1	0.0966	0.1231	0.0265	
CUYAHOGA	N-080	472219D	GRANGER AVENUE	Flasher	1,880	2	35	0	13.5	34.1	0.0423	0.0577	0.0154	
CUYAHOGA	N-080	472230D	WEBB ROAD	Flasher	2,350	2	35	0	13.5	34.1	0.0451	0.0608	0.0157	
CUYAHOGA	N-080	472237B	LINDA STREET	Gate	2,090	2	35	0	13.5	34.1	0.0243	0.0341	0.0099	
CUYAHOGA	N-080	472239P	MORRWOOD STREET	Gate	960	2	35	0	13.5	34.1	0.0209	0.0298	0.0089	
CUYAHOGA	N-080	472240J	WAGER ROAD	Gate	4,520	2	35	0	13.5	34.1	0.0303	0.0417	0.0114	
CUYAHOGA	N-080	472241R	ELMWOOD ROAD	Gate	2,340	2	35	0	13.5	34.1	0.0260	0.0363	0.0103	
CUYAHOGA	N-080	472245T	COLUMBIA ROAD	Gate	11,320	2	60	1	13.5	34.1	0.0936	0.1165	0.0229	
CUYAHOGA	N-080	472248N	DOVER CENTER ROAD	Gate	7,630	2	60	0	13.5	34.1	0.0340	0.0462	0.0122	
CUYAHOGA	N-080	472249V	CAHOON ROAD	Flasher	3,110	2	60	1	13.5	34.1	0.1171	0.1463	0.0292	
CUYAHOGA	N-080	472250P	BASSETT ROAD	Gate	240	2	60	0	13.5	34.1	0.0147	0.0214	0.0067	
CUYAHOGA	N-080	472252D	BRADLEY ROAD	Gate	5,670	2	60	0	13.5	34.1	0.0319	0.0436	0.0117	
CUYAHOGA	N-081	524190E	EAST 26TH ST	Gate	3,500	2	40	0	12.5	29.7	0.0271	0.0369	0.0098	
CUYAHOGA	N-081	524223P	BESSEMER	Gate	2,680	2	40	1	12.5	29.7	0.0739	0.0912	0.0173	
CUYAHOGA	N-081	524226K	AETNA	Gate	2,560	2	40	2	12.5	29.7	0.1210	0.1458	0.0248	
DEFIANCE	C-066	142343Y	SNYDER	Passive	110	2	60	0	21.4	47.7	0.0592	0.0766	0.0174	
DEFIANCE	C-066	142345M	HARRIS	Passive	230	2	60	0	21.4	47.7	0.0699	0.0878	0.0179	
DEFIANCE	C-066	142348H	HIRE	Gate	2,920	2	60	0	21.4	47.7	0.0305	0.0403	0.0098	
DEFIANCE	C-066	142352X	SQUIER ST	Flasher	1,280	2	60	0	21.4	47.7	0.0443	0.0577	0.0134	
DEFIANCE	C-066	142356A	OTTAWA AVE	Gate	10,120	2	60	0	21.4	47.7	0.0400	0.0513	0.0113	
DEFIANCE	C-066	142366F	JACKSON ST	Flasher	700	2	60	2	21.4	47.7	0.1392	0.1690	0.0298	0.0227
DEFIANCE	C-066	142367M	DEATRICK ST	Gate	4,460	2	35	0	21.4	47.7	0.0299	0.0395	0.0096	
DEFIANCE	C-066	142368U	ATLANTIC DR	Gate	1,110	2	35	1	21.4	47.7	0.0655	0.0793	0.0138	
DEFIANCE	C-066	142370V	KROUSE RD	Gate	422	2	60	0	21.4	47.7	0.0168	0.0232	0.0064	
DEFIANCE	C-066	142374X	ASHWOOD RD	Passive	100	2	60	0	21.4	47.7	0.0579	0.0751	0.0173	
DEFIANCE	C-066	142375E	US 24	Gate	5,910	2	79	0	21.4	47.7	0.0319	0.0419	0.0100	
DEFIANCE	C-066	142377T	TITTLE RD	Passive	10	2	60	0	21.4	47.7	0.0186	0.0271	0.0085	
DEFIANCE	C-066	142379G	JACOBS RD	Passive	10	2	60	0	21.4	47.7	0.0186	0.0271	0.0085	

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DEFIANCE	C-066	142381H	THE BEND RD	Flasher	480	2	60	0	21.4	47.7	0.0331	0.0448	0.0116	
DEFIANCE	C-066	142382P	DELAWARE ST	Flasher	330	2	60	0	21.4	47.7	0.0294	0.0403	0.0109	
DEFIANCE	C-066	142385K	COY RD	Passive	10	1	60	0	21.4	47.7	0.0098	0.0148	0.0049	
DEFIANCE	C-066	142386S	HARRISON AVENUE	Gate	3,090	2	35	1	21.4	47.7	0.0825	0.1002	0.0177	
DEFIANCE	C-066	142387Y	BEHNFEDT RD	Passive	50	2	60	0	21.4	47.7	0.0510	0.0675	0.0165	
DEFIANCE	C-066	142388F	OPENLANDER RD	Gate	120	2	60	0	21.4	47.7	0.0138	0.0193	0.0054	
DEFIANCE	C-066	142389M	WILLIAMS CNTR RD	Passive	51	2	60	0	21.4	47.7	0.0489	0.0651	0.0162	
DEFIANCE	C-066	142390G	FARMER MARK RD	Flasher	480	2	60	0	21.4	47.7	0.0331	0.0448	0.0116	
DEFIANCE	C-066	142392V	WONDERLY RD	Passive	60	2	60	0	21.4	47.7	0.0535	0.0703	0.0168	
DEFIANCE	C-066	142394J	BREININER	Passive	110	2	60	0	21.4	47.7	0.0592	0.0766	0.0174	
DEFIANCE	C-066	142396X	ROSEDALE RD	Passive	110	2	60	0	21.4	47.7	0.0592	0.0766	0.0174	
DEFIANCE	C-066	142398L	CICERO	Passive	30	2	60	0	21.4	47.7	0.0424	0.0575	0.0151	
DEFIANCE	C-066	142402Y	LAKE RD	Passive	70	2	60	0	21.4	47.7	0.0530	0.0698	0.0168	
DEFIANCE	N-080	472211Y	SUMMIT AVENUE	Flasher	1,570	2	35	0	13.5	34.1	0.0402	0.0552	0.0150	
DELAWARE	N-073	481482D	FRANKLIN	Passive	35	1	60	0	26.0	34.3	0.0281	0.0318	0.0037	
DELAWARE	N-073	481483K	LEWIS CENTER	Flasher	744	2	60	0	26.0	34.3	0.0355	0.0395	0.0040	
DELAWARE	N-073	481485Y	SHANNON ROAD	Gate	460	2	60	0	26.0	34.3	0.0187	0.0209	0.0022	
DELAWARE	N-073	481487M	PEACHBLOW ROAD	Passive	460	2	60	0	26.0	34.3	0.0850	0.0912	0.0062	
DELAWARE	N-073	481488U	CHESIRE ROAD	Gate	590	2	60	0	26.0	34.3	0.0199	0.0222	0.0023	
DELAWARE	N-073	481490V	BERLIN ROAD	Passive	330	2	60	1	26.0	34.3	0.1768	0.1880	0.0112	0.0174
DELAWARE	N-073	481498A	HORSESHOE ROAD	Gate	1,290	2	60	0	26.0	34.3	0.0241	0.0268	0.0027	
DELAWARE	N-073	481503U	PENRY	Passive	100	2	60	0	26.0	34.3	0.0621	0.0681	0.0059	
DELAWARE	N-073	481504B	WILLEY	Passive	60	2	60	0	26.0	34.3	0.0550	0.0607	0.0057	
DELAWARE	N-073	481505H	TROUTMAN	Passive	70	2	60	0	26.0	34.3	0.0571	0.0629	0.0058	
DELAWARE	N-073	481506P	RADNOR	Flasher	580	2	60	0	26.0	34.3	0.0287	0.0322	0.0034	
DELAWARE	N-073	481512T	NORTON	Gate	420	2	60	1	26.0	34.3	0.0598	0.0636	0.0039	
ERIE	N-080	472312K	COEN ROAD/ 147	Gate	420	2	60	1	13.5	34.1	0.0535	0.0657	0.0122	
ERIE	N-080	472313S	RISDEN ROAD	Gate	390	2	60	1	13.5	34.1	0.0530	0.0650	0.0120	
ERIE	N-080	472315F	BARNES ROAD	Passive	340	2	60	0	13.5	34.1	0.0685	0.0892	0.0207	
ERIE	N-080	472316M	STANLEY ROAD	Passive	110	2	60	0	13.5	34.1	0.0526	0.0721	0.0195	
ERIE	N-080	472318B	JOPPA ROAD	Gate	270	2	60	0	13.5	34.1	0.0132	0.0193	0.0061	
ERIE	N-080	472320C	FRAILEY RD	Gate	290	2	60	1	13.5	34.1	0.0510	0.0622	0.0112	
ERIE	N-080	472321J	DARROW RD	Gate	570	2	60	0	13.5	34.1	0.0160	0.0232	0.0072	
ERIE	N-080	472322R	SMOKEY ROAD/ TR80	Gate	100	2	60	2	13.5	34.1	0.0799	0.0926	0.0127	
ERIE	N-080	472323X	STATE ROUTE 61	Flasher	2,430	2	60	0	13.5	34.1	0.0407	0.0558	0.0151	
ERIE	N-080	472325L	BARROWS ROAD	Flasher	760	2	60	0	13.5	34.1	0.0284	0.0409	0.0125	
ERIE	N-080	472328G	JEFFRIES ROAD	Gate	270	2	60	0	13.5	34.1	0.0131	0.0193	0.0061	
ERIE	N-080	472329N	WEIKEL ROAD	Passive	110	2	60	0	13.5	34.1	0.0525	0.0719	0.0194	
ERIE	N-080	472334K	HOOVER ROAD	Passive	140	2	60	0	13.5	34.1	0.0557	0.0756	0.0198	

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ERIE	N-072	472341V	STRECKER ROAD	Flasher	420	2	60	0	15.6	27.0	0.0247	0.0311	0.0064	
ERIE	N-072	472344R	THOMAS ROAD	Passive	130	2	60	0	15.6	27.0	0.0576	0.0693	0.0116	
ERIE	N-072	472345X	RANSOM RD	Gate	250	2	60	0	15.6	27.0	0.0137	0.0172	0.0035	
ERIE	N-072	472348T	PATTEN TRACT ROAD	Gate	540	2	60	1	15.6	27.0	0.0612	0.0695	0.0083	
ERIE	N-072	472351B	STATE ROUTE 99	Gate	2,300	2	25	1	15.6	27.0	0.0750	0.0857	0.0107	
ERIE	N-080	472306G	WATER STREET	Gate	6,260	2	60	0	13.5	34.1	0.0289	0.0400	0.0111	
ERIE	N-080	472308V	STATE STREET	Gate	5,330	2	60	1	13.5	34.1	0.0770	0.0964	0.0195	
ERIE	N-080	876686J	DOUGLAS ST	Gate	100	2	60	0	13.5	34.1	0.0101	0.0150	0.0049	
ERIE	N-085	481642P	POTTER	Passive	310	2	35	0	1.4	11.7	0.0239	0.0569	0.0330	
ERIE	N-085	481643W	KNAUS	Passive	80	2	35	0	1.4	11.7	0.0154	0.0399	0.0245	
ERIE	N-085	481646S	BRAGG	Passive	40	2	35	1	1.4	11.7	0.0549	0.0918	0.0369	
ERIE	N-085	481647Y	STRECKER	Gate	170	2	35	2	1.4	11.7	0.0651	0.0823	0.0172	
ERIE	N-085	481649M	BILLINGS	Passive	160	2	35	0	1.4	11.7	0.0193	0.0482	0.0288	
ERIE	N-085	481651N	PORTLAND RD	Gate	510	2	35	2	1.4	11.7	0.0686	0.0903	0.0217	
ERIE	N-085	481653C	MAPLE AVE	Passive	80	2	35	0	1.4	11.7	0.0154	0.0399	0.0245	
ERIE	N-085	481657E	MASON	Passive	760	2	35	0	1.4	11.7	0.0315	0.0698	0.0383	
ERIE	N-085	481659T	BRADSHAR	Passive	130	2	35	1	1.4	11.7	0.0643	0.1121	0.0478	
ERIE	N-085	481660M	SKADDEN/ CR 42	Passive	800	2	35	1	1.4	11.7	0.0887	0.1564	0.0677	0.0114
ERIE	N-085	481665W	BOGART	Flasher	3,900	2	15	0	1.4	11.7	0.0184	0.0433	0.0249	
ERIE	N-085	481668S	SR 101 TIFFIN	Gate	5,950	2	15	0	1.4	11.7	0.0135	0.0306	0.0171	
ERIE	N-085	481669Y	VENICE	Gate	4,400	2	15	0	1.4	11.7	0.0126	0.0288	0.0163	
ERIE	N-085	481670T	OLDS	Gate	1,140	2	15	1	1.4	11.7	0.0425	0.0644	0.0218	
ERIE	N-085	481671A	MONROE	Gate	3,630	2	15	0	1.4	11.7	0.0119	0.0276	0.0156	
FRANKLIN	N-073	481467B	WEBER	Gate	8,678	2	45	0	26.0	34.3	0.0415	0.0453	0.0038	
FRANKLIN	N-073	481470J	COOK	Flasher	11,424	2	45	1	26.0	34.3	0.1679	0.1767	0.0088	
FRANKLIN	N-073	481472X	LINCOLN	Gate	9,810	2	45	0	26.0	34.3	0.0425	0.0464	0.0039	
FRANKLIN	N-073	481474L	SHROCK	Gate	1,856	2	60	0	26.0	34.3	0.0304	0.0336	0.0032	
FRANKLIN	N-073	481475T	GALENA-WRTHNGTON	Gate	1,255	2	60	1	26.0	34.3	0.0769	0.0822	0.0054	
FRANKLIN	N-073	481476A	WILSON BRIDGE	Gate	1,950	2	60	0	26.0	34.3	0.0307	0.0339	0.0032	
FRANKLIN	N-073	481478N	PARK	Gate	399	2	60	0	26.0	34.3	0.0211	0.0235	0.0024	
HARDIN	C-062	532646K	COUNTY LINE RD	Passive	250	2	40	0	5.9	13.9	0.0412	0.0570	0.0158	
HARDIN	C-062	532647S	LOUISA ST	Passive	100	1	40	0	5.9	13.9	0.0175	0.0261	0.0087	
HARDIN	C-062	532648Y	MARY ST	Gate	550	1	40	0	5.9	13.9	0.0094	0.0136	0.0042	
HARDIN	C-062	532649F	GORMLY ST	Gate	1,370	2	40	0	5.9	13.9	0.0137	0.0195	0.0057	
HARDIN	C-062	532650A	DAVIS ST	Passive	310	2	40	0	5.9	13.9	0.0437	0.0600	0.0163	
HARDIN	C-062	532651G	MARTIN ST SR 37	Flasher	2,190	2	40	0	5.9	13.9	0.0283	0.0396	0.0113	
HARDIN	C-062	532652N	CAMPBELL ST	Passive	240	2	40	0	5.9	13.9	0.0407	0.0564	0.0158	
HARDIN	C-062	532653V	BERLIN CR	Passive	110	2	40	0	5.9	13.9	0.0315	0.0450	0.0134	
HARDIN	C-062	532655J	PATTERSON RD	Passive	100	2	40	0	5.9	13.9	0.0316	0.0451	0.0135	

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Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
HARDIN	C-062	532658E	GROAT CR	Passive	70	1	40	0	5.9	13.9	0.0155	0.0234	0.0078	
HARDIN	C-062	532659L	WYKES CR	Passive	40	1	40	0	5.9	13.9	0.0128	0.0195	0.0067	
HARDIN	C-062	532662U	WALNUT ST	Flasher	580	2	40	0	5.9	13.9	0.0176	0.0257	0.0080	
HARDIN	C-062	532663B	MAIN ST-US #68	Gate	4,730	2	40	0	5.9	13.9	0.0189	0.0264	0.0074	
HARDIN	C-062	532664H	CHERRY ST	Flasher	210	2	40	0	5.9	13.9	0.0121	0.0181	0.0059	
HARDIN	C-062	532665P	TOWNSHIP ROAD	Passive	280	2	40	0	5.9	13.9	0.0425	0.0586	0.0161	
HARDIN	C-062	532667D	HOPPS RD	Passive	50	1	40	0	5.9	13.9	0.0139	0.0210	0.0071	
HARDIN	C-062	532669S	WAYNE ST	Flasher	80	2	40	0	5.9	13.9	0.0084	0.0127	0.0043	
HARDIN	C-062	532670L	MAIN ST	Gate	390	2	40	0	5.9	13.9	0.0098	0.0141	0.0043	
HARDIN	C-062	532671T	CROZIER CR	Passive	80	2	50	0	5.9	13.9	0.0314	0.0449	0.0135	
HARDIN	C-062	532673G	TRAVERSE PIKE	Passive	40	1	50	0	5.9	13.9	0.0138	0.0209	0.0071	
HARDIN	C-062	532675V	PETERSON CR -SR81	Gate	610	2	50	0	5.9	13.9	0.0111	0.0159	0.0048	
HARDIN	C-062	532676C	SCOTT CROSSING	Passive	310	2	50	0	5.9	13.9	0.0462	0.0630	0.0168	
HARDIN	C-062	532677J	VAN ATTA RD	Passive	200	1	50	0	5.9	13.9	0.0234	0.0343	0.0109	
HARDIN	C-062	532678R	JOHNSON ST	Gate	1,630	2	50	0	5.9	13.9	0.0144	0.0204	0.0060	
HARDIN	C-062	532679X	MAIN ST	Gate	6,310	2	50	1	5.9	13.9	0.0635	0.0777	0.0142	
HARDIN	C-062	532680S	GILBERT ST	Gate	1,050	2	50	0	5.9	13.9	0.0128	0.0182	0.0054	
HARDIN	C-062	532681Y	KLINGLER ROAD	Passive	420	2	50	0	5.9	13.9	0.0500	0.0674	0.0174	
HARDIN	C-062	532682F	ST. PAUL ROAD	Passive	150	2	50	1	5.9	13.9	0.1010	0.1282	0.0272	
HARDIN	C-062	532684U	COUNTY LINE ROAD	Passive	290	2	50	0	5.9	13.9	0.0454	0.0620	0.0167	
HARDIN	C-071	518370N	MAIN ST	Gate	1,080	2	60	0	16.1	31.8	0.0218	0.0283	0.0065	
HARDIN	C-071	518371V	TR 179	Passive	30	1	60	0	16.1	31.8	0.0215	0.0294	0.0079	
HARDIN	C-071	518372C	TR 197	Passive	160	2	60	0	16.1	31.8	0.0589	0.0735	0.0146	
HARDIN	C-071	518373J	W MANSFIELD RD	Gate	260	2	60	0	16.1	31.8	0.0152	0.0200	0.0049	
HARDIN	C-071	518376E	MAIN ST	Gate	4,610	2	60	0	16.1	31.8	0.0305	0.0387	0.0082	
HARDIN	C-071	518379A	WHEELER-MT VCTRY	Gate	270	2	60	2	16.1	31.8	0.0936	0.1063	0.0127	
HARDIN	C-071	518381B	BORDAN ROAD	Passive	40	1	60	0	16.1	31.8	0.0235	0.0320	0.0085	
HARDIN	C-071	518382H	MARSH ROAD	Passive	270	2	60	1	16.1	31.8	0.1525	0.1796	0.0271	0.0155
HARDIN	C-071	518384W	MITCHELL RD/ TR 217	Passive	60	1	60	0	16.1	31.8	0.0267	0.0361	0.0094	
HENRY	C-065	155755Y	MAIN ST	Flasher	3,010	2	50	1	0.6	14.2	0.0486	0.1054	0.0569	0.0224
HENRY	C-065	155757M	MAPLE ST	Flasher	1,120	2	50	0	0.6	14.2	0.0079	0.0321	0.0242	
HENRY	C-065	155759B	ELM ST	Passive	400	2	50	0	0.6	14.2	0.0193	0.0671	0.0479	
HENRY	C-065	155760V	NORTH ST	Passive	1,150	2	50	0	0.6	14.2	0.0270	0.0831	0.0561	0.0161
HENRY	C-065	155761C	CR E	Passive	60	2	50	0	0.6	14.2	0.0102	0.0419	0.0317	
HENRY	C-065	155762J	HNRY-WOOD CO LNRD	Passive	220	2	50	0	0.6	14.2	0.0158	0.0586	0.0427	
HENRY	C-066	142303B	N KEYSER AVE	Gate	1,000	2	60	0	21.4	47.7	0.0243	0.0327	0.0084	
HENRY	C-066	142304H	TOWNSHIP ROAD 3 (CR 3)	Flasher	200	2	60	1	21.4	47.7	0.0732	0.0909	0.0177	
HENRY	C-066	142305P	TWP D	Passive	70	2	60	0	21.4	47.7	0.0540	0.0709	0.0169	

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County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
HENRY	C-066	142306W	SR 65/18	Gate	870	2	60	2	21.4	47.7	0.1147	0.1360	0.0213	
HENRY	C-066	142307D	CR 5	Passive	30	2	60	0	21.4	47.7	0.0433	0.0586	0.0153	
HENRY	C-066	142308K	CR 6	Passive	30	2	60	0	21.4	47.7	0.0433	0.0586	0.0153	
HENRY	C-066	142309S	CR 7	Passive	220	2	60	0	21.4	47.7	0.0703	0.0882	0.0179	
HENRY	C-066	142310L	CR E	Gate	70	2	60	1	21.4	47.7	0.0490	0.0578	0.0088	
HENRY	C-066	142311T	TWNSHP HWY	Passive	50	1	60	0	21.4	47.7	0.0292	0.0412	0.0120	
HENRY	C-066	142312A	TWHSHP 8B	Passive	110	2	60	0	21.4	47.7	0.0602	0.0777	0.0175	
HENRY	C-066	142313G	MAIN ST	Flasher	540	2	60	0	21.4	47.7	0.0300	0.0410	0.0110	
HENRY	C-066	142314N	MARION ST	Flasher	540	2	60	0	21.4	47.7	0.0300	0.0410	0.0110	
HENRY	C-066	142315V	FIRST ST	Gate	1,860	2	60	1	21.4	47.7	0.0716	0.0870	0.0154	
HENRY	C-066	142316C	CR 10	Passive	50	2	60	0	21.4	47.7	0.0496	0.0659	0.0163	
HENRY	C-066	142320S	CR 11	Passive	30	2	60	0	21.4	47.7	0.0433	0.0586	0.0153	
HENRY	C-066	142321Y	TWP F	Passive	130	2	60	0	21.4	47.7	0.0626	0.0802	0.0176	
HENRY	C-066	142323M	CR 12	Gate	280	2	60	1	21.4	47.7	0.0547	0.0654	0.0107	
HENRY	C-066	142325B	CR 13	Flasher	130	2	60	0	21.4	47.7	0.0185	0.0263	0.0078	
HENRY	C-066	142326H	KEYSER ST	Gate	1,980	2	60	1	21.4	47.7	0.0723	0.0879	0.0156	
HENRY	C-066	142328W	WILHELM	Flasher	2,130	2	60	0	21.4	47.7	0.0453	0.0589	0.0136	
HENRY	C-066	142329D	BRAYER ST	Gate	230	2	60	1	21.4	47.7	0.0533	0.0636	0.0103	
HENRY	C-066	142334A	CR 16	Passive	80	2	60	0	21.4	47.7	0.0558	0.0729	0.0171	
HENRY	C-066	142335G	CR 17	Passive	160	2	60	0	21.4	47.7	0.0656	0.0834	0.0178	
HENRY	C-066	142338C	CR 18	Passive	90	2	60	0	21.4	47.7	0.0574	0.0746	0.0172	
HENRY	C-066	142340D	CR 19	Flasher	230	2	60	0	21.4	47.7	0.0226	0.0317	0.0091	
HURON	C-061	518483U	KNIFFEN RD	Flasher	200	2	60	0	14.5	54.2	0.0181	0.0319	0.0138	
HURON	C-061	518484B	ALPHA RD	Passive	80	1	60	0	14.5	54.2	0.0283	0.0491	0.0209	
HURON	C-061	518485H	SR 13	Gate	790	2	60	0	14.5	54.2	0.0172	0.0289	0.0116	
HURON	C-061	518486P	OMEGA	Passive	40	1	60	0	14.5	54.2	0.0228	0.0408	0.0180	
HURON	C-061	518487W	US 250	Gate	3,720	2	60	0	14.5	54.2	0.0253	0.0405	0.0152	
HURON	C-061	518488D	TOWNLINE	Passive	130	1	60	1	14.5	54.2	0.0919	0.1329	0.0411	
HURON	C-061	518489K	GREENWICH E TWNLN	Passive	60	1	60	0	14.5	54.2	0.0259	0.0456	0.0197	
HURON	C-061	518491L	W MAIN ST	Gate	3,610	2	60	0	14.5	54.2	0.0251	0.0402	0.0151	
HURON	C-061	518492T	N MAIN ST (SR 60)	Gate	3,870	2	60	0	14.5	54.2	0.0256	0.0408	0.0153	
HURON	C-061	518493A	WALNUT ST	Flasher	510	2	60	0	14.5	54.2	0.0250	0.0423	0.0172	
HURON	C-061	518495N	CHENANGO RD	Passive	140	2	60	0	14.5	54.2	0.0556	0.0842	0.0286	
HURON	C-061	518496V	NEW LONDON SEC RD	Passive	220	2	60	0	14.5	54.2	0.0619	0.0911	0.0291	
HURON	C-061	518497C	BUTLER RD	Passive	150	2	60	0	14.5	54.2	0.0566	0.0853	0.0287	
HURON	C-067	518477R	EDWARDS RD	Passive	70	1	60	0	14.5	31.3	0.0271	0.0380	0.0109	
HURON	C-067	518479E	PLYMOUTH EAST RD	Flasher	80	1	60	0	14.5	31.3	0.0110	0.0158	0.0048	
HURON	C-067	518480Y	GREENWICH-MILAN	Passive	100	1	60	0	14.5	31.3	0.0303	0.0420	0.0117	
HURON	C-067	518481F	MAIN ST	Gate	5,100	2	60	0	14.5	31.3	0.0273	0.0360	0.0087	

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									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
HURON	C-067	518482M	TOWNSEND ST	Gate	1,390	2	60	0	14.5	31.3	0.0199	0.0268	0.0069	
HURON	C-068	142119N	KNIFFIN ST	Flasher	200	2	60	0	32.5	55.2	0.0299	0.0369	0.0070	
HURON	C-068	142120H	UNION ST	Flasher	80	2	40	0	32.5	55.2	0.0220	0.0276	0.0056	
HURON	C-068	142123D	MILAN-GREENWCH RD	Gate	660	2	60	1	32.5	55.2	0.0728	0.0828	0.0100	
HURON	C-068	142124K	LANE	Passive	10	2	60	0	32.5	55.2	0.0230	0.0293	0.0063	
HURON	C-068	142125S	EDWARDS	Passive	140	2	60	0	32.5	55.2	0.0723	0.0841	0.0119	
HURON	C-068	142126Y	OLD STATE RD	Passive	150	2	60	0	32.5	55.2	0.0733	0.0852	0.0119	
HURON	C-068	142127F	BOUGHTONVILLE RD	Passive	250	2	60	0	32.5	55.2	0.0810	0.0929	0.0119	
HURON	C-068	142129U	NEW STATE RD	Passive	440	2	60	0	32.5	55.2	0.0896	0.1012	0.0116	
HURON	C-068	142135X	PERU CENTER	Gate	710	2	60	0	32.5	55.2	0.0260	0.0316	0.0056	
HURON	C-068	142137L	THIRD ST	Gate	220	2	60	0	32.5	55.2	0.0194	0.0240	0.0045	
HURON	C-068	142139A	FIRST ST	Gate	1,280	2	60	0	32.5	55.2	0.0298	0.0359	0.0062	
HURON	C-075	142142H	SECTION LINE ROAD	Gate	890	2	50	1	32.5	54.0	0.0754	0.0853	0.0099	
HURON	C-075	142144W	DANIELS RD	Passive	60	1	60	0	32.5	54.0	0.0361	0.0445	0.0084	
HURON	C-075	142145D	WULTZ	Passive	20	1	60	1	32.5	54.0	0.0606	0.0684	0.0078	
HURON	N-079	473665B	SOUTHWEST ST	Gate	2,250	2	20	0	7.7	27.2	0.0174	0.0285	0.0110	
HURON	N-072	472356K	MONROE STREET	Passive	1,760	2	25	0	1.4	11.7	0.0367	0.0773	0.0406	
HURON	N-085	481638A	S BUCKEYE(CENTER)	Gate	670	2	15	2	1.4	11.7	0.0722	0.0982	0.0260	
HURON	N-085	481641H	GOODRICH	Gate	670	2	20	1	1.4	11.7	0.0385	0.0553	0.0168	
LAKE	N-075	472013D	COUNTY LINE RD	Gate	2,810	2	60	0	13.0	36.6	0.0220	0.0324	0.0104	
LAKE	N-075	472015S	BATES ROAD	Gate	510	2	60	0	13.0	36.6	0.0142	0.0217	0.0074	
LAKE	N-075	472017F	LAKE STREET	Flasher	8,810	2	60	0	13.0	36.6	0.0549	0.0733	0.0185	
LAKE	N-075	472018M	DAYTON ROAD	Flasher	890	2	60	0	13.0	36.6	0.0282	0.0422	0.0140	
LAKE	N-075	472023J	WOOD ROAD	Gate	101	2	60	1	13.0	36.6	0.0434	0.0526	0.0092	
LAKE	N-075	472024R	TOWNLINE ROAD	Gate	1,120	2	60	0	13.0	36.6	0.0174	0.0262	0.0088	
LAKE	N-075	472025X	DAVIS ROAD	Gate	570	2	60	0	13.0	36.6	0.0146	0.0223	0.0076	
LAKE	N-075	472026E	MAIN STREET	Flasher	1,190	2	60	1	13.0	36.6	0.0835	0.1102	0.0267	
LAKE	N-075	472027L	MAPLE	Flasher	450	2	60	0	13.0	36.6	0.0224	0.0345	0.0121	
LAKE	N-075	472028T	SHEPARD ROAD	Gate	1,360	2	60	0	13.0	36.6	0.0183	0.0274	0.0091	
LAKE	N-075	472029A	BAKER ROAD	Passive	10	1	60	0	13.0	36.6	0.0075	0.0128	0.0053	
LAKE	N-075	472030U	LANE ROAD	Gate	1,250	2	60	0	13.0	36.6	0.0179	0.0269	0.0089	
LAKE	N-075	472031B	PARK ROAD	Flasher	1,090	2	60	0	13.0	36.6	0.0301	0.0447	0.0146	
LAKE	N-075	472032H	MADISON AVENUE	Gate	3,590	2	60	2	13.0	36.6	0.1144	0.1426	0.0282	
LAKE	N-075	472033P	RIVERSIDE DRIVE	Flasher	1,830	2	60	0	13.0	36.6	0.0354	0.0514	0.0159	
LAKE	N-075	472035D	BANK ST	Gate	2,320	2	30	0	13.0	36.6	0.0210	0.0310	0.0101	
LAKE	N-075	472036K	STATE STREET	Gate	2,990	2	30	0	13.0	36.6	0.0223	0.0328	0.0105	
LAKE	N-075	472039F	LIBERTY ST	Gate	7,580	2	35	0	13.0	36.6	0.0279	0.0401	0.0122	
LAKE	N-075	472040A	CHESTNUT STREET	Gate	5,980	2	35	0	13.0	36.6	0.0264	0.0381	0.0118	
LAKE	N-075	472044C	MENTOR AVENUE	Gate	19,260	2	60	0	13.0	36.6	0.0344	0.0482	0.0138	

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LAKE	N-075	472045J	JACKSON STREET	Gate	5,230	2	60	0	13.0	36.6	0.0255	0.0371	0.0115	
LAKE	N-075	472046R	HEISLEY ROAD	Gate	5,360	2	60	0	13.0	36.6	0.0273	0.0393	0.0120	
LAKE	N-075	472048E	HOPKINS ROAD	Gate	5,460	2	60	0	13.0	36.6	0.0263	0.0381	0.0118	
LAKE	N-075	472050F	STATION ST	Gate	2,100	2	60	1	13.0	36.6	0.0644	0.0825	0.0181	
LAKE	N-075	472051M	MAPLE STREET	Flasher	870	2	60	0	13.0	36.6	0.0284	0.0424	0.0141	
LAKE	N-075	472052U	HART STREET	Gate	2,850	2	60	1	13.0	36.6	0.0674	0.0864	0.0191	
LAKE	N-075	472055P	PELTON STREET	Gate	4,380	2	60	0	13.0	36.6	0.0250	0.0364	0.0114	
LAKE	N-075	472056W	ERIE STREET	Gate	8,570	2	60	0	13.0	36.6	0.0292	0.0418	0.0126	
LAKE	N-075	472060L	CHURCH STREET	Flasher	260	2	50	0	13.0	36.6	0.0188	0.0294	0.0106	
LAKE	N-075	472062A	BEILDER ROAD	Flasher	2,965	2	60	0	13.0	36.6	0.0414	0.0585	0.0171	
LAKE	N-075	472064N	RUSH ROAD	Gate	6,164	4	60	0	13.0	36.6	0.0312	0.0441	0.0130	
LAKE	N-075	472068R	LLOYD ROAD	Gate	7,400	2	35	0	13.0	36.6	0.0283	0.0406	0.0123	
LAKE	N-075	472070S	DEPOT ROAD	Flasher	20	2	35	1	13.0	36.6	0.0407	0.0491	0.0085	
LAKE	N-075	472263R	PATTERSON DRIVE	Gate	250	2	60	1	13.0	36.6	0.0485	0.0602	0.0117	
LORAIN	C-061	518498J	GORE-ORPHANAGE RD	Passive	20	1	60	0	14.5	54.2	0.0190	0.0348	0.0158	
LORAIN	C-061	518499R	BURSLEY RD	Passive	110	1	60	0	14.5	54.2	0.0324	0.0551	0.0227	
LORAIN	C-061	518501P	STATE ST	Gate	1,070	2	60	0	14.5	54.2	0.0221	0.0360	0.0139	
LORAIN	C-061	518502W	GRIGGS RD	Gate	140	2	60	0	14.5	54.2	0.0131	0.0225	0.0094	
LORAIN	C-061	518503D	ANDERSON RD	Passive	10	1	60	0	14.5	54.2	0.0087	0.0169	0.0082	
LORAIN	C-061	518504K	QUARRY RD	Flasher	230	2	60	0	14.5	54.2	0.0230	0.0393	0.0163	
LORAIN	C-061	518506Y	JONES RD	Flasher	230	2	60	0	14.5	54.2	0.0230	0.0393	0.0163	
LORAIN	C-061	518507F	PITTS RD	Passive	220	2	60	2	14.5	54.2	0.2320	0.3081	0.0761	0.0205
LORAIN	C-061	518508M	MAGYAR	Flasher	300	2	60	0	14.5	54.2	0.0250	0.0422	0.0172	
LORAIN	C-061	518509U	HERRICK AVE	Gate	7,870	2	60	0	14.5	54.2	0.0347	0.0528	0.0181	
LORAIN	C-061	518510N	NO. MAIN ST	Gate	8,120	2	60	0	14.5	54.2	0.0341	0.0520	0.0179	
LORAIN	C-061	518511V	BARKER ST	Gate	660	2	60	1	14.5	54.2	0.0607	0.0829	0.0223	
LORAIN	C-061	518512C	HAWLEY RD	Flasher	140	1	60	1	14.5	54.2	0.0566	0.0793	0.0227	
LORAIN	C-061	518513J	PECK-WADSWORTH RD	Flasher	80	1	60	0	14.5	54.2	0.0131	0.0238	0.0107	
LORAIN	C-061	518514R	WEBSTER RD	Gate	310	2	60	1	14.5	54.2	0.0547	0.0739	0.0192	
LORAIN	C-061	518515X	NICKLE PLATE RD	Gate	1,120	2	60	0	14.5	54.2	0.0188	0.0312	0.0124	
LORAIN	C-061	518518T	WHITEHEAD ST	Gate	270	2	60	2	14.5	54.2	0.0876	0.1118	0.0242	
LORAIN	C-061	518519A	WHITNEY	Flasher	70	2	60	1	14.5	54.2	0.0541	0.0753	0.0211	
LORAIN	C-061	518520U	S. CENTER ST	Gate	2,550	2	60	0	14.5	54.2	0.0262	0.0416	0.0155	
LORAIN	C-061	518521B	E. MAIN ST	Gate	2,660	2	60	0	14.5	54.2	0.0264	0.0420	0.0156	
LORAIN	C-061	518522H	WHEELER RD	Flasher	160	2	60	1	14.5	54.2	0.0632	0.0897	0.0264	
LORAIN	C-061	518523P	BIGGS RD	Flasher	60	1	60	1	14.5	54.2	0.0488	0.0665	0.0177	
LORAIN	C-061	518527S	INDIAN-HOLLOW RD	Gate	1,910	2	60	0	14.5	54.2	0.0244	0.0392	0.0148	
LORAIN	C-061	518529F	CROOK RD	Flasher	170	2	60	0	14.5	54.2	0.0202	0.0351	0.0149	
LORAIN	C-061	518530A	MAIN ST	Gate	5,750	2	50	0	14.5	54.2	0.0320	0.0494	0.0174	

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LORAIN	C-061	518531G	ELM ST	Flasher	1,050	2	60	0	14.5	54.2	0.0370	0.0582	0.0212	
LORAIN	C-061	518532N	AVON-BELDEN	Gate	4,450	2	60	0	14.5	54.2	0.0264	0.0420	0.0156	
LORAIN	C-061	518533V	ISLAND RD	Gate	820	2	60	2	14.5	54.2	0.0990	0.1294	0.0304	
LORAIN	C-061	518534C	REED RD	Flasher	420	2	60	0	14.5	54.2	0.0277	0.0460	0.0183	
LORAIN	C-061	518535J	TWNSBRG-ELYRIA RD	Gate	6,020	2	60	0	14.5	54.2	0.0288	0.0452	0.0164	
LORAIN	C-061	518536R	HAWKE RD	Gate	920	1	60	0	14.5	54.2	0.0182	0.0303	0.0121	
LORAIN	C-061	518537X	ROOT RD	Gate	1,010	2	60	1	14.5	54.2	0.0648	0.0889	0.0242	
LORAIN	C-061	518538E	STATION RD	Gate	1,420	2	60	0	14.5	54.2	0.0229	0.0371	0.0142	
LORAIN	C-061	518539L	OSBORNE RD	Flasher	70	1	60	0	14.5	54.2	0.0125	0.0228	0.0103	
LORAIN	C-061	518540F	JAQUAY	Flasher	230	1	60	0	14.5	54.2	0.0193	0.0337	0.0144	
LORAIN	N-080	472256F	NAGLE RD	Gate	610	2	60	2	13.5	34.1	0.0963	0.1154	0.0191	
LORAIN	N-080	472257M	JAYCOX ROAD	Gate	610	2	60	0	13.5	34.1	0.0164	0.0237	0.0074	
LORAIN	N-080	472258U	AVON CENTER ROAD	Gate	6,700	2	60	0	13.5	34.1	0.0295	0.0407	0.0112	
LORAIN	N-080	472268A	MOORE ROAD	Gate	4,410	2	60	1	13.5	34.1	0.0793	0.0992	0.0200	
LORAIN	N-080	472269G	MILLER ROAD	Gate	5,110	2	60	0	13.5	34.1	0.0310	0.0426	0.0116	
LORAIN	N-080	472277Y	HARRIS ROAD	Gate	2,490	2	60	0	13.5	34.1	0.0263	0.0367	0.0104	
LORAIN	N-080	472278F	LAKE BREEZE ROAD	Gate	2,160	2	60	0	13.5	34.1	0.0254	0.0356	0.0102	
LORAIN	N-080	472281N	ROOT ROAD	Gate	1,797	2	60	0	13.5	34.1	0.0234	0.0330	0.0096	
LORAIN	N-080	472282V	EUCLID AVENUE	Gate	1,660	2	60	0	13.5	34.1	0.0210	0.0299	0.0089	
LORAIN	N-080	472283C	MISSOURI AVENUE	Gate	3,520	2	60	0	13.5	34.1	0.0252	0.0354	0.0101	
LORAIN	N-080	472284J	KANSAS AVENUE	Gate	3,483	4	60	3	13.5	34.1	0.1877	0.2273	0.0396	a
LORAIN	N-080	472286X	COLORADO AVENUE	Gate	6,270	2	35	1	13.5	34.1	0.0789	0.0988	0.0199	
LORAIN	N-080	472289T	RIED STREET	Gate	3,700	2	35	0	13.5	34.1	0.0255	0.0358	0.0102	
LORAIN	N-080	472290M	LONG STREET	Gate	650	2	35	0	13.5	34.1	0.0166	0.0240	0.0074	
LORAIN	N-080	472291U	WASHINGTON STREET	Gate	3,670	2	35	0	13.5	34.1	0.0255	0.0357	0.0102	
LORAIN	N-080	472292B	OBERLIN AVENUE	Gate	11,060	2	35	0	13.5	34.1	0.0329	0.0448	0.0119	
LORAIN	N-080	472293H	LEAVITT ROAD	Gate	9,660	2	60	0	13.5	34.1	0.0319	0.0436	0.0117	
LORAIN	N-080	472299Y	WOODSIDE DR	Gate	560	2	60	0	13.5	34.1	0.0182	0.0262	0.0080	
LORAIN	N-080	472300R	OVERLOOK RD	Gate	3,230	2	60	2	13.5	34.1	0.1180	0.1439	0.0260	
LUCAS	C-040	232121N	DIXIE (DETROIT)	Gate	5,290	4	45	0	21.9	33.1	0.0440	0.0499	0.0059	
LUCAS	C-040	232122V	CONNEAU	Gate	460	2	30	3	21.9	33.1	0.1521	0.1646	0.0125	a
LUCAS	N-077	509436M	OAKDALE AVE	Gate	5,970	2	69	0	48.0	61.5	0.0474	0.0510	0.0036	
MAHONING	N-082	544711X	VALLEY ST	Flasher	781	2	30	0	11.7	23.8	0.0304	0.0400	0.0097	
MAHONING	N-082	544716G	HUBBARD RD	Gate	7,698	2	30	1	11.7	23.8	0.0821	0.0975	0.0154	
MARION	C-070	228721J	CENTER STREET	Gate	6,550	4	30	0	17.8	27.4	0.0424	0.0485	0.0061	
MARION	C-070	228722R	SILVER STREET	Gate	4,380	2	30	0	17.8	27.4	0.0317	0.0368	0.0052	
MARION	C-070	228723X	FAIRGROUNDS ST	Gate	2,270	2	30	0	17.8	27.4	0.0273	0.0319	0.0047	
MARION	C-070	228726T	HILLMAN-FORD RD	Passive	690	2	50	0	17.8	27.4	0.0799	0.0896	0.0097	
MARION	C-070	228729N	KENTON-GALION RD	Gate	230	2	50	0	17.8	27.4	0.0154	0.0184	0.0030	

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MARION	C-070	228730H	IRVIN-SHOOTS ROAD	Passive	240	2	50	0	17.8	27.4	0.0641	0.0735	0.0094	
MARION	C-070	228731P	MARSEILLES-GALION	Passive	230	2	50	0	17.8	27.4	0.0639	0.0733	0.0094	
MARION	C-070	228732W	S. EAST ST.	Flasher	400	2	50	0	17.8	27.4	0.0252	0.0302	0.0050	
MARION	C-070	228733D	W. NEFF ST.	Flasher	930	2	50	0	17.8	27.4	0.0331	0.0391	0.0060	
MARION	C-070	228734K	N. CENTER ST.	Passive	60	1	50	0	17.8	27.4	0.0266	0.0323	0.0057	
MARION	C-070	228735S	WEST	Passive	20	1	50	0	17.8	27.4	0.0187	0.0230	0.0043	
MARION	C-070	228736Y	COUNTY LINE ROAD	Passive	120	1	50	0	17.8	27.4	0.0329	0.0395	0.0066	
MARION	C-071	518385D	MARION-HARDIN RD	Passive	30	1	60	0	16.1	31.8	0.0224	0.0306	0.0082	
MARION	C-071	518387S	LARUE-MT. VICTORY	Flasher	570	2	60	0	16.1	31.8	0.0269	0.0354	0.0085	
MARION	C-071	518388Y	WINNEMAC RD	Passive	10	2	60	0	16.1	31.8	0.0163	0.0226	0.0063	
MARION	C-071	518389F	FRONT ST.	Flasher	500	2	60	0	16.1	31.8	0.0258	0.0340	0.0083	
MARION	C-071	518390A	HIGH ST.	Flasher	1,700	2	60	0	16.1	31.8	0.0380	0.0485	0.0105	
MARION	C-071	518391G	SECTION ST.	Gate	750	2	60	4	16.1	31.8	0.1808	0.2037	0.0229	a
MARION	C-071	518392N	DRY LANE RD	Passive	110	2	60	0	16.1	31.8	0.0538	0.0679	0.0142	
MARION	C-071	518393V	DECLIFF RD.	Passive	140	2	60	0	16.1	31.8	0.0570	0.0715	0.0145	
MARION	C-071	518396R	MAIN ST.	Flasher	760	2	60	0	16.1	31.8	0.0296	0.0387	0.0091	
MARION	C-071	518397X	SO. CAREY	Passive	550	1	60	0	16.1	31.8	0.0503	0.0641	0.0138	
MARION	C-071	518398E	SR. 95	Gate	2,000	2	60	0	16.1	31.8	0.0223	0.0289	0.0066	
MARION	C-071	518407B	ESPYVILLE RD.	Passive	90	1	60	0	16.1	31.8	0.0302	0.0405	0.0102	
MARION	C-071	518410J	UPR SANDSKY PRSPT	Gate	910	2	60	1	16.1	31.8	0.0599	0.0701	0.0102	
MARION	C-071	518413E	CAMPBELL	Gate	4,070	2	60	1	16.1	31.8	0.0806	0.0952	0.0145	
MARION	C-071	518415T	CENTER ST.	Gate	6,550	2	50	0	16.1	31.8	0.0333	0.0419	0.0086	
MARION	N-073	481515N	SR 47	Flasher	1,390	2	60	1	26.0	34.3	0.1046	0.1125	0.0079	
MARION	N-073	481516V	MAIN	Flasher	690	2	60	0	26.0	34.3	0.0347	0.0386	0.0039	
MARION	N-073	481518J	KLINGLE	Passive	130	2	60	0	26.0	34.3	0.0659	0.0720	0.0061	
MARION	N-073	481520K	BETHLEHEM	Gate	340	2	60	1	26.0	34.3	0.0580	0.0617	0.0037	
MARION	N-073	481521S	WOLFINGER	Passive	130	1	60	0	26.0	34.3	0.0412	0.0461	0.0048	
MARION	N-073	481522Y	NEWMAN CRDNGTN	Passive	230	2	60	0	26.0	34.3	0.0744	0.0806	0.0062	
MARION	N-073	481524M	BENZLER LUST	Gate	170	2	60	1	26.0	34.3	0.0529	0.0561	0.0032	
MARION	N-073	481525U	OWENS	Gate	990	2	60	0	26.0	34.3	0.0226	0.0252	0.0026	
MARION	N-073	481526B	SUMMERLOT HFFMAN	Gate	1,390	2	60	0	26.0	34.3	0.0246	0.0273	0.0027	
MARION	N-073	481529W	MARION CARL[illegible]GTON	Gate	1,110	2	60	0	26.0	34.3	0.0233	0.0259	0.0026	
MARION	N-073	481530R	BARKS	Gate	7,120	2	35	0	26.0	34.3	0.0398	0.0436	0.0037	
MARION	N-073	481531X	PROSPECT	Gate	8,880	2	35	0	26.0	34.3	0.0417	0.0455	0.0038	
MARION	N-073	481532E	BELLEFOUNTAINE	Gate	11,740	3	30	1	26.0	34.3	0.1139	0.1213	0.0074	
MARION	N-073	481533L	DARIUS	Gate	1,140	2	30	0	26.0	34.3	0.0265	0.0294	0.0029	
MARION	N-073	481536G	CENTER	Gate	8,290	4	30	0	26.0	34.3	0.0496	0.0537	0.0041	
MARION	N-073	481538V	SILVER	Gate	6,380	2	30	0	26.0	34.3	0.0389	0.0426	0.0037	
MARION	N-073	481539C	FAIRGROUND	Gate	1,850	2	30	0	26.0	34.3	0.0297	0.0328	0.0031	

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MARION	N-073	481540W	WILLIAMSPORT	Gate	700	2	60	0	26.0	34.3	0.0236	0.0262	0.0026	
MARION	N-073	481541D	N MAIN SR 4	Gate	8,770	2	60	1	26.0	34.3	0.1017	0.1085	0.0069	
MARION	N-073	481542K	LIKENS	Gate	970	2	60	3	26.0	34.3	0.1673	0.1768	0.0095	
MARION	N-073	481544Y	LINN-HIPSHER	Gate	320	2	60	2	26.0	34.3	0.1042	0.1101	0.0059	
MARION	N-073	481545F	LUCAS	Passive	100	2	60	0	26.0	34.3	0.0621	0.0681	0.0059	
MARION	N-073	481546M	GALION-MARSEILLES	Passive	140	2	60	1	26.0	34.3	0.1536	0.1646	0.0109	0.0127
MARION	N-073	481547U	SCOTT TWP RD-190	Passive	130	2	60	1	26.0	34.3	0.1516	0.1625	0.0109	0.0124
MARION	N-073	481548B	MORRAL KIRKPATRCK	Passive	210	2	60	0	26.0	34.3	0.0731	0.0793	0.0062	
MARION	N-073	481550C	COUNTY LINE	Passive	40	2	60	0	26.0	34.3	0.0497	0.0551	0.0054	
MARION	N-073	481535A	COLUMBIA	Gate	75	2	30	0	26.0	34.3	0.0134	0.0150	0.0016	
OTTAWA	N-077	509390B	BENTON ROAD	Passive	190	2	60	0	48.0	61.5	0.0861	0.0917	0.0055	
OTTAWA	N-077	509391H	PORTAGE RD	Gate	280	2	60	0	48.0	61.5	0.0244	0.0268	0.0024	
OTTAWA	N-077	509392P	VOGEL RD	Passive	60	1	60	0	48.0	61.5	0.0271	0.0303	0.0032	
OTTAWA	N-077	509393W	BENTON-TARRO RD	Gate	740	2	60	0	48.0	61.5	0.0306	0.0334	0.0028	
OTTAWA	N-077	509394D	LICKERT	Gate	360	2	60	1	48.0	61.5	0.0734	0.0780	0.0045	
OTTAWA	N-077	509395K	ROCKY RIDGE	Gate	760	2	60	1	48.0	61.5	0.0822	0.0874	0.0051	
OTTAWA	N-077	509396S	WEST	Passive	90	1	60	0	48.0	61.5	0.0484	0.0531	0.0048	
OTTAWA	N-077	509397Y	SR 590 LIMESTONE	Gate	670	2	60	2	48.0	61.5	0.1314	0.1387	0.0073	
OTTAWA	N-077	509400E	TRUE RD	Gate	180	2	60	0	48.0	61.5	0.0219	0.0241	0.0022	
OTTAWA	N-077	509401L	TWP 21 STANGE	Gate	200	2	60	1	48.0	61.5	0.0673	0.0713	0.0041	
OTTAWA	N-077	509402T	GRAYTOWN(WALKER)	Gate	810	2	60	0	48.0	61.5	0.0312	0.0341	0.0029	
OTTAWA	N-077	509403A	TOUSSIANT NORTH	Gate	20	2	60	1	48.0	61.5	0.0492	0.0517	0.0025	
OTTAWA	N-077	509404G	JAMES	Passive	130	1	60	0	48.0	61.5	0.0531	0.0581	0.0050	
OTTAWA	N-077	509405N	ELLISTON-BENTON	Flasher	400	2	60	0	48.0	61.5	0.0431	0.0471	0.0039	
OTTAWA	N-077	509406V	NISSEN RD	Gate	370	2	60	0	48.0	61.5	0.0260	0.0286	0.0025	
OTTAWA	N-077	509407C	LENTZ-OPFER	Passive	130	1	60	0	48.0	61.5	0.0531	0.0581	0.0050	
OTTAWA	N-077	509408J	MARTIN (FOURTH)	Gate	440	2	60	0	48.0	61.5	0.0271	0.0297	0.0026	
OTTAWA	N-077	509409R	WILLISTON RD	Flasher	460	2	60	0	48.0	61.5	0.0448	0.0489	0.0040	
OTTAWA	N-077	509410K	GENOA-CLAY RD	Gate	2,560	2	60	0	48.0	61.5	0.0400	0.0434	0.0034	
OTTAWA	N-077	509411S	(TROWBRDG)BOLAND	Gate	930	2	60	0	48.0	61.5	0.0322	0.0351	0.0029	
OTTAWA	N-077	509412Y	REIMAN	Passive	180	1	60	0	48.0	61.5	0.0576	0.0627	0.0052	
OTTAWA	N-077	509413F	BILLMAN RD	Gate	210	1	60	2	48.0	61.5	0.1061	0.1115	0.0054	
OTTAWA	N-077	509415U	FOSTORIA RD	Gate	1,490	2	60	0	48.0	61.5	0.0357	0.0389	0.0031	
OTTAWA	N-079	473745U	BLOOM RD	Passive	100	1	55	0	7.7	27.2	0.0219	0.0385	0.0165	
OTTAWA	N-079	473747H	ELMORE EAST RD	Passive	200	2	55	0	7.7	27.2	0.0468	0.0726	0.0258	
OTTAWA	N-079	473750R	CULLMAN (TWP 107)	Passive	100	2	55	0	7.7	27.2	0.0387	0.0624	0.0237	
OTTAWA	N-079	473752E	PORTAGE RIVER RD	Passive	930	2	55	0	7.7	27.2	0.0679	0.0959	0.0280	
OTTAWA	N-079	473754T	WATER ST	Gate	7,530	2	35	0	7.7	27.2	0.0236	0.0373	0.0137	
RICHLAND	C-067	518446S	BEAM RD	Gate	720	2	60	1	14.5	31.3	0.0603	0.0721	0.0118	

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RICHLAND	C-067	518448F	THRUSH RD	Passive	30	1	60	0	14.5	31.3	0.0201	0.0287	0.0086	
RICHLAND	C-067	518449M	HOOK RD	Passive	100	2	60	0	14.5	31.3	0.0498	0.0654	0.0156	
RICHLAND	C-067	518450G	FINNEGAN RD	Passive	70	1	60	0	14.5	31.3	0.0263	0.0369	0.0106	
RICHLAND	C-067	518451N	SETTLEMENT RD	Gate	350	2	60	0	14.5	31.3	0.0154	0.0211	0.0056	
RICHLAND	C-067	518452V	GERMAN-STTLMNT RD	Flasher	700	2	60	0	14.5	31.3	0.0323	0.0433	0.0110	
RICHLAND	C-067	518454J	STENTZ RD	Passive	120	2	60	0	14.5	31.3	0.0535	0.0696	0.0161	
RICHLAND	C-067	518455R	HUMMEL RD	Passive	600	2	60	0	14.5	31.3	0.0768	0.0940	0.0172	
RICHLAND	C-067	518456X	MAIN ST	Flasher	8,700	2	60	1	14.5	31.3	0.1428	0.1678	0.0250	0.0598
RICHLAND	C-067	518458L	NO GAMBLE	Gate	7,630	2	60	0	14.5	31.3	0.0300	0.0392	0.0092	
RICHLAND	C-067	518459T	SMILEY	Flasher	3,420	2	60	0	14.5	31.3	0.0511	0.0646	0.0135	
RICHLAND	C-067	518460M	NO BROADWAY	Gate	3,520	2	60	1	14.5	31.3	0.0784	0.0945	0.0161	
RICHLAND	C-067	518461U	SHELBY-GANGES RD	Gate	680	2	60	0	14.5	31.3	0.0166	0.0226	0.0060	
RICHLAND	C-067	518462B	LONDON WEST RD	Passive	460	2	60	0	14.5	31.3	0.0735	0.0907	0.0172	
RICHLAND	C-067	518464P	BISTLINE	Passive	80	2	60	0	14.5	31.3	0.0489	0.0644	0.0155	
RICHLAND	C-067	518465W	SPRGMLL-PLYMTH RD	Gate	1,000	2	60	0	14.5	31.3	0.1087	0.1276	0.0189	
RICHLAND	C-067	518466D	HAZEL-BRUSH RD	Passive	90	1	60	0	14.5	31.3	0.0178	0.0257	0.0078	
RICHLAND	C-067	518468S	BOWMAN RD	Flasher	1,440	2	60	0	14.5	31.3	0.0406	0.0530	0.0124	
RICHLAND	C-067	518472G	MAIN ST	Gate	2,530	2	60	0	14.5	31.3	0.0265	0.0350	0.0085	
RICHLAND	C-067	518473N	NOBLE RD	Passive	120	1	60	0	14.5	31.3	0.0196	0.0281	0.0085	
RICHLAND	C-067	518474V	MALONE RD	Passive	40	1	60	0	14.5	31.3	0.0136	0.0198	0.0062	
RICHLAND	C-067	518475C	PLANKTOWN	Passive	260	2	60	0	14.5	31.3	0.0651	0.0821	0.0170	
RICHLAND	C-067	518476J	BASE LINE RD	Passive	200	2	60	1	14.5	31.3	0.1432	0.1735	0.0302	0.0143
SANDUSKY	N-071	481635E	SANDUSKY CO 305	Passive	70	1	15	0	26.0	34.5	0.0265	0.0301	0.0036	
SANDUSKY	N-079	473667P	YORK ST	Passive	450	2	20	0	7.7	27.2	0.0479	0.0738	0.0260	
SANDUSKY	N-079	473668W	KILBOURNE	Gate	9,330	2	20	2	7.7	27.2	0.1183	0.1551	0.0368	a
SANDUSKY	N-079	473669D	MT PLEASANT RD	Gate	1,870	2	20	0	7.7	27.2	0.0177	0.0290	0.0112	
SANDUSKY	N-079	473671E	CR 302	Passive	400	2	20	0	7.7	27.2	0.0489	0.0752	0.0263	
SANDUSKY	N-079	473672L	CR 177	Flasher	1,390	2	55	1	7.7	27.2	0.0760	0.1066	0.0306	
SANDUSKY	N-079	473673T	CR 292	Passive	330	2	55	1	7.7	27.2	0.1289	0.1773	0.0484	0.0151
SANDUSKY	N-079	473678C	CR 270	Passive	140	2	55	0	7.7	27.2	0.0425	0.0673	0.0248	
SANDUSKY	N-079	473679J	COBLEY RD	Passive	120	1	55	0	7.7	27.2	0.0233	0.0405	0.0173	
SANDUSKY	N-079	473680D	CR175	Gate	710	2	55	3	7.7	27.2	0.1244	0.1540	0.0296	a
SANDUSKY	N-079	473681K	CR 260	Passive	250	2	55	0	7.7	27.2	0.0496	0.0760	0.0263	
SANDUSKY	N-079	473683Y	EAST ST	Passive	410	2	35	0	7.7	27.2	0.0507	0.0772	0.0265	
SANDUSKY	N-079	473684F	DUANE ST	Flasher	1,800	2	35	0	7.7	27.2	0.0292	0.0470	0.0179	
SANDUSKY	N-079	473685M	CHURCH ST	Flasher	610	2	35	0	7.7	27.2	0.0202	0.0344	0.0141	
SANDUSKY	N-079	473686U	MAPLE ST	Flasher	3,180	2	35	0	7.7	27.2	0.0349	0.0546	0.0197	
SANDUSKY	N-079	473687B	MAIN ST	Flasher	7,230	2	35	0	7.7	27.2	0.0444	0.0660	0.0216	
SANDUSKY	N-079	473688H	VINE ST	Flasher	830	2	35	0	7.7	27.2	0.0225	0.0377	0.0152	

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SANDUSKY	N-079	473690J	GEORGE ST	Gate	720	2	35	1	7.7	27.2	0.0502	0.0659	0.0157	
SANDUSKY	N-079	473691R	NELSON ST	Passive	250	2	35	0	7.7	27.2	0.0445	0.0697	0.0252	
SANDUSKY	N-079	473692X	AMANDA ST	Flasher	1,230	2	35	0	7.7	27.2	0.0257	0.0423	0.0166	
SANDUSKY	N-079	473693E	SPRING ST	Gate	1,280	2	35	0	7.7	27.2	0.0151	0.0249	0.0099	
SANDUSKY	N-079	473696A	WOODLAND	Flasher	4,220	2	55	0	7.7	27.2	0.0380	0.0585	0.0204	
SANDUSKY	N-079	473697G	CR 236	Passive	740	2	55	0	7.7	27.2	0.0646	0.0925	0.0279	
SANDUSKY	N-079	473698N	CR 224	Passive	37	2	50	0	7.7	27.2	0.0280	0.0476	0.0196	
SANDUSKY	N-079	473700M	CR 220	Passive	90	2	50	0	7.7	27.2	0.0365	0.0594	0.0229	
SANDUSKY	N-079	473702B	CR 212	Passive	250	2	50	0	7.7	27.2	0.0483	0.0744	0.0261	
SANDUSKY	N-079	473703H	E STATE ST	Flasher	1,350	2	50	0	7.7	27.2	0.0265	0.0434	0.0169	
SANDUSKY	N-079	473704P	CR 198	Gate	740	2	50	1	7.7	27.2	0.0503	0.0661	0.0158	
SANDUSKY	N-079	473705W	FINEFROCK RD	Gate	670	2	50	2	7.7	27.2	0.0868	0.1091	0.0223	
SANDUSKY	N-079	473706D	SMITH RD	Gate	1,240	2	50	0	7.7	27.2	0.0149	0.0247	0.0098	
SANDUSKY	N-079	473707K	BUCHANAN ST	Flasher	2,140	2	40	0	7.7	27.2	0.0308	0.0493	0.0185	
SANDUSKY	N-079	473709Y	HAYES AVE	Gate	2,743	4	40	0	7.7	27.2	0.0233	0.0369	0.0136	
SANDUSKY	N-079	473711A	STATE	Gate	19,380	4	25	0	7.7	27.2	0.0365	0.0541	0.0175	
SANDUSKY	N-079	473716J	NORTH ST	Passive	80	2	35	1	7.7	27.2	0.0908	0.1293	0.0385	
SANDUSKY	N-079	473717R	SAND ST	Passive	70	2	35	0	7.7	27.2	0.0309	0.0518	0.0209	
SANDUSKY	N-079	473719E	PORT CLINTON (SR 53)	Gate	2,710	2	35	0	7.7	27.2	0.0183	0.0297	0.0114	
SANDUSKY	N-079	473726P	UNKNOWN	Passive	210	2	50	1	7.7	27.2	0.1160	0.1622	0.0461	0.0123
SANDUSKY	N-079	473728D	CR 89	Passive	540	2	50	0	7.7	27.2	0.0586	0.0861	0.0275	
SANDUSKY	N-079	473730E	LINDSEY RD	Passive	10	1	50	0	7.7	27.2	0.0055	0.0106	0.0051	
SANDUSKY	N-079	473731L	SR 19	Flasher	3,470	2	50	0	7.7	27.2	0.0358	0.0558	0.0199	
SANDUSKY	N-079	473734G	CR127	Passive	170	2	55	0	7.7	27.2	0.0448	0.0702	0.0253	
SANDUSKY	N-079	473739R	CR 143	Passive	80	2	55	0	7.7	27.2	0.0363	0.0592	0.0229	
SANDUSKY	N-079	473740K	CR 153	Passive	130	2	55	0	7.7	27.2	0.0417	0.0662	0.0245	
SANDUSKY	N-079	473742Y	CR 89	Passive	30	1	55	0	7.7	27.2	0.0085	0.0160	0.0075	
SENECA	C-070	228770F	TR 240	Passive	90	2	50	0	17.8	27.4	0.0510	0.0596	0.0086	
SENECA	C-070	228772U	CO00600	Passive	310	2	50	0	17.8	27.4	0.0683	0.0778	0.0095	
SENECA	C-070	228773B	TWP 0560	Passive	40	2	50	1	17.8	27.4	0.1089	0.1229	0.0140	
SENECA	C-070	228774H	MAIN STREET	Passive	180	2	50	1	17.8	27.4	0.1442	0.1609	0.0168	0.0121
SENECA	C-070	228775P	TWP 0960	Passive	50	2	50	0	17.8	27.4	0.0448	0.0529	0.0081	
SENECA	C-070	228776W	TWP 0100	Passive	20	1	50	0	17.8	27.4	0.0194	0.0237	0.0044	
SENECA	C-070	228778K	050 2240	Gate	3,530	2	50	1	17.8	27.4	0.0769	0.0854	0.0085	
SENECA	C-070	228779S	TWP 0108	Passive	80	2	50	0	17.8	27.4	0.0507	0.0593	0.0086	
SENECA	C-070	228780L	TWP 0180	Passive	200	2	50	1	17.8	27.4	0.1469	0.1638	0.0169	0.0126
SENECA	C-070	228781T	TWP 0112	Passive	350	2	50	0	17.8	27.4	0.0701	0.0797	0.0096	
SENECA	C-070	228784N	COLUMBUS AVE	Gate	1,270	2	35	0	17.8	27.4	0.0240	0.0283	0.0043	
SENECA	C-070	228786C	NORTH STREET	Gate	1,070	2	35	1	17.8	27.4	0.0684	0.0758	0.0074	

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SENECA	C-070	228787J	FREMONT STREET	Gate	1,900	2	35	0	17.8	27.4	0.0265	0.0310	0.0046	
SENECA	C-070	228788R	SANDUSKY STREET	Gate	1,610	2	35	0	17.8	27.4	0.0254	0.0299	0.0044	
SENECA	C-070	228789X	HIGH STREET	Gate	820	2	35	1	17.8	27.4	0.0657	0.0728	0.0071	
SENECA	C-075	142149F	TR 1046	Passive	100	2	60	0	32.5	54.0	0.0682	0.0795	0.0113	
SENECA	C-075	142154C	SANDUSKY COLUMBIA	Gate	3,360	2	60	1	32.5	54.0	0.0944	0.1066	0.0122	
SENECA	C-075	142155J	TR 81G	Passive	250	2	60	0	32.5	54.0	0.0820	0.0934	0.0114	
SENECA	C-075	142160F	TR 106	Passive	70	2	60	0	32.5	54.0	0.0630	0.0741	0.0111	
SENECA	C-075	142161M	TR 79N	Passive	70	2	60	0	32.5	54.0	0.0630	0.0741	0.0111	
SENECA	C-075	142164H	TR 181	Passive	60	2	60	0	32.5	54.0	0.0608	0.0718	0.0110	
SENECA	C-075	142165P	MUD ROAD	Passive	30	2	60	0	32.5	54.0	0.0329	0.0408	0.0079	
SENECA	C-075	142166W	LIBERTY ST (TR 181D)	Gate	160	2	60	1	32.5	54.0	0.0599	0.0673	0.0074	
SENECA	C-075	142169S	BROADWAY STREET	Passive	30	2	60	0	32.5	54.0	0.0513	0.0616	0.0103	
SENECA	C-075	142170L	KILBOURN STREET	Gate	1,190	2	60	0	32.5	54.0	0.0298	0.0357	0.0059	
SENECA	C-075	142172A	CR 43	Passive	150	2	60	0	32.5	54.0	0.0743	0.0857	0.0114	
SENECA	C-075	142177J	CR 17	Passive	80	2	60	0	32.5	54.0	0.0649	0.0761	0.0112	
SENECA	C-075	142178R	GILLICK ROAD	Passive	110	2	60	1	32.5	54.0	0.1582	0.1786	0.0204	0.0153
SENECA	C-075	142179X	MORRISON ROAD	Passive	300	2	60	1	32.5	54.0	0.1856	0.2059	0.0203	0.0221
SENECA	C-075	142180S	TR 153	Gate	1,050	2	60	0	32.5	54.0	0.0290	0.0348	0.0058	
SENECA	C-075	142181Y	HOLMES ST	Gate	540	2	60	1	32.5	54.0	0.0715	0.0808	0.0094	
SENECA	C-075	142183M	PERRY ST	Gate	3,249	2	60	0	32.5	54.0	0.0372	0.0440	0.0068	
SENECA	C-075	142184U	MARKET ST	Gate	3,899	2	60	0	32.5	54.0	0.0387	0.0456	0.0069	
SENECA	C-075	142185B	CLINTON AVENUE	Flasher	437	4	35	0	32.5	54.0	0.0494	0.0582	0.0087	
SENECA	C-075	142189D	NORTH MONROE	Gate	418	2	35	0	32.5	54.0	0.0233	0.0283	0.0050	
SENECA	C-075	142193T	NELSON ST	Gate	1,710	2	60	0	32.5	54.0	0.0324	0.0386	0.0062	
SENECA	C-075	142195G	TR 121A	Passive	260	2	60	0	32.5	54.0	0.0826	0.0940	0.0114	
SENECA	C-075	142198C	TR 31	Passive	20	2	60	0	32.5	54.0	0.0462	0.0559	0.0098	
SENECA	C-075	142200B	TR 109Q	Gate	280	2	60	0	32.5	54.0	0.0211	0.0257	0.0046	
SENECA	C-075	142206S	BEECH ST	Gate	1,630	2	60	0	32.5	54.0	0.0320	0.0382	0.0062	
SENECA	C-075	142210G	CR 101	Passive	120	2	60	0	32.5	54.0	0.0709	0.0823	0.0114	
SENECA	C-075	142213C	CR 5	Passive	110	2	60	0	32.5	54.0	0.0696	0.0809	0.0113	
SENECA	C-075	142215R	TR 57	Passive	50	2	60	0	32.5	54.0	0.0582	0.0690	0.0108	
SENECA	C-075	142216X	TR 57	Passive	60	2	60	0	32.5	54.0	0.0608	0.0718	0.0110	
SENECA	C-075	142230T	TR 43	Passive	70	2	60	0	32.5	54.0	0.0630	0.0741	0.0111	
SENECA	C-075	142232G	COLUMBUS AVENUE	Gate	2,750	2	60	0	32.5	54.0	0.0359	0.0426	0.0066	
SENECA	C-075	142233N	LEWIS ST	Passive	100	2	60	0	32.5	54.0	0.0682	0.0795	0.0113	
SENECA	C-075	142234V	POPLAR ST	Gate	1,900	2	60	1	32.5	54.0	0.0860	0.0973	0.0113	
SENECA	C-075	142235C	MAIN ST	Gate	2,290	2	60	0	32.5	54.0	0.0342	0.0407	0.0064	
SENECA	N-071	481595J	TWP 44	Passive	90	1	60	0	26.0	34.5	0.0372	0.0418	0.0046	
SENECA	N-071	481599L	C 8	Passive	120	1	60	0	26.0	34.5	0.0403	0.0452	0.0049	

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SENECA	N-071	481602S	CENTER SCHOOL	Passive	100	1	60	0	26.0	34.5	0.0383	0.0430	0.0047	
SENECA	N-071	481603Y	TIFFIN	Gate	770	2	60	0	26.0	34.5	0.0213	0.0238	0.0025	
SENECA	N-071	481604F	TWP 88	Passive	110	1	60	0	26.0	34.5	0.0393	0.0441	0.0048	
SENECA	N-071	481606U	US 224	Gate	5,270	2	60	2	26.0	34.5	0.1407	0.1496	0.0090	
SENECA	N-071	481607B	LEMON ST	Gate	470	2	60	1	26.0	34.5	0.0607	0.0648	0.0041	
SENECA	N-071	481610J	TWP 104	Passive	160	1	60	0	26.0	34.5	0.0436	0.0488	0.0051	
SENECA	N-071	481614L	4 & SENECA CO 36	Flasher	3,330	2	60	0	26.0	34.5	0.0540	0.0589	0.0049	
SENECA	N-071	481616A	TWP 8	Passive	110	1	60	0	26.0	34.5	0.0393	0.0441	0.0048	
SENECA	N-071	481617G	SR162	Gate	700	2	60	2	26.0	34.5	0.1077	0.1141	0.0063	
SENECA	N-071	481618N	TWP 122	Passive	50	1	60	0	26.0	34.5	0.0313	0.0354	0.0041	
SENECA	N-071	481619V	TWP 124	Passive	30	1	60	1	26.0	34.5	0.0811	0.0877	0.0066	
SENECA	N-071	481620P	T-126	Passive	30	1	60	0	26.0	34.5	0.0268	0.0304	0.0036	
SENECA	N-071	481621W	SENECA CO 24	Passive	90	1	60	0	26.0	34.5	0.0372	0.0418	0.0046	
SENECA	N-071	481622D	T-136	Passive	40	1	60	0	26.0	34.5	0.0292	0.0331	0.0039	
SENECA	N-071	481623K	C-46	Passive	270	2	60	0	26.0	34.5	0.0769	0.0832	0.0063	
SENECA	N-071	481624S	C-32	Passive	100	1	60	0	26.0	34.5	0.0383	0.0430	0.0047	
SENECA	N-071	481626F	T-178	Passive	330	2	60	0	26.0	34.5	0.0799	0.0863	0.0064	
SENECA	N-071	481627M	T-199	Passive	10	1	60	0	26.0	34.5	0.0188	0.0216	0.0027	
SENECA	N-071	481630V	MAIN	Flasher	950	2	60	1	26.0	34.5	0.0966	0.1042	0.0076	
SENECA	N-071	481631C	CO-34	Passive	710	2	60	0	26.0	34.5	0.0916	0.0978	0.0062	
SENECA	N-071	481634X	COUNTY LINE ROAD	Gate	230	2	60	1	26.0	34.5	0.0550	0.0585	0.0035	
TRUMBULL	N-082	503129T	WAKEFIELD CRK RD	Passive	90	2	40	0	11.7	23.8	0.0402	0.0530	0.0128	
TRUMBULL	N-082	503130M	SR 87	Gate	1,180	2	40	0	11.7	23.8	0.0172	0.0228	0.0056	
TRUMBULL	N-082	503131U	GARDNER BARCLAY	Passive	220	2	40	0	11.7	23.8	0.0511	0.0655	0.0145	
TRUMBULL	N-082	503132B	SR 88	Gate	2,050	2	40	0	11.7	23.8	0.0198	0.0260	0.0063	
TRUMBULL	N-082	503133H	BRADLEY-BROWNLEE	Gate	530	2	40	4	11.7	23.8	0.1660	0.1858	0.0198	a
TRUMBULL	N-082	503134P	CORLAND HULL RD	Passive	120	2	40	1	11.7	23.8	0.1113	0.1354	0.0241	
TRUMBULL	N-082	503135W	DAVIS PECK RD	Passive	280	2	40	0	11.7	23.8	0.0543	0.0691	0.0148	
TRUMBULL	N-082	503136D	FISHER CORINTH RD	Passive	120	2	40	0	11.7	23.8	0.0435	0.0569	0.0134	
TRUMBULL	N-082	503138S	SR 305	Gate	2,150	2	40	0	11.7	23.8	0.0200	0.0263	0.0063	
TRUMBULL	N-082	544717N	LOGAN GATE RD	Flasher	2,165	2	40	0	11.7	23.8	0.0414	0.0529	0.0115	
TRUMBULL	N-082	544718V	SR 304	Gate	3,438	2	40	0	11.7	23.8	0.0225	0.0294	0.0069	
TRUMBULL	N-082	544719C	LEWIS-SEIFERT	Flasher	960	2	40	0	11.7	23.8	0.0279	0.0370	0.0091	
TRUMBULL	N-082	544720W	BELL WICK RD	Flasher	1,012	2	40	0	11.7	23.8	0.0284	0.0376	0.0093	
TRUMBULL	N-082	544721D	MT. EVERT	Gate	690	2	40	0	11.7	23.8	0.0171	0.0227	0.0056	
TRUMBULL	N-082	544729H	WARREN SHARON RD	Flasher	2,925	2	40	2	11.7	23.8	0.1581	0.1873	0.0291	0.0283
TRUMBULL	N-082	544731J	AMY BOIL RD	Passive	30	2	40	1	11.7	23.8	0.0643	0.0769	0.0126	
TRUMBULL	N-082	544732R	KINGS GRAVE RD	Gate	550	2	40	0	11.7	23.8	0.0141	0.0188	0.0048	
VAN WERT	C-062	532746P	CANAL ST.	Flasher	820	2	40	0	5.9	13.9	0.0234	0.0334	0.0100	

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VAN WERT	C-062	532747W	JEFFERSON ST	Flasher	1,200	2	40	0	5.9	13.9	0.0228	0.0325	0.0098	
VAN WERT	C-062	532748D	S. CLAY ST	Gate	1,050	2	40	0	5.9	13.9	0.0128	0.0182	0.0054	
VAN WERT	C-062	532749K	S BREDICK ST	Flasher	1,490	2	40	0	5.9	13.9	0.0245	0.0348	0.0103	
VAN WERT	C-062	532750E	STATE ST	Gate	2,530	2	60	0	5.9	13.9	0.0161	0.0227	0.0066	
VAN WERT	C-062	532751L	BRICKNER RD	Passive	180	2	40	0	5.9	13.9	0.0375	0.0526	0.0150	
VAN WERT	C-062	532754G	BOCKEY RD	Passive	200	2	40	0	5.9	13.9	0.0387	0.0540	0.0153	
VAN WERT	C-062	532755N	CONVERSE RD	Passive	130	2	40	0	5.9	13.9	0.0341	0.0483	0.0142	
VAN WERT	C-062	532756V	MIDDLEPOINT RD	Passive	280	2	40	0	5.9	13.9	0.0425	0.0586	0.0161	
VAN WERT	C-062	532757C	MAIN ST	Flasher	170	2	40	0	5.9	13.9	0.0112	0.0167	0.0055	
VAN WERT	C-062	532758J	ADAMS ST	Flasher	980	2	40	0	5.9	13.9	0.0212	0.0305	0.0093	
VAN WERT	C-062	532759R	MASON ST	Flasher	340	2	40	0	5.9	13.9	0.0145	0.0214	0.0069	
VAN WERT	C-062	532760K	DOG CREEK RD	Passive	410	2	40	0	5.9	13.9	0.0471	0.0640	0.0169	
VAN WERT	C-062	532761S	RINGWALD RD	Passive	160	2	40	0	5.9	13.9	0.0363	0.0510	0.0147	
VAN WERT	C-062	532762Y	CHENOWITH RD	Passive	90	2	40	0	5.9	13.9	0.0306	0.0438	0.0132	
VAN WERT	C-062	532763F	GAMBLE RD	Passive	80	2	40	0	5.9	13.9	0.0295	0.0424	0.0129	
VAN WERT	C-062	532764M	HOAGLIN CENTER RD	Passive	260	2	40	0	5.9	13.9	0.0416	0.0575	0.0159	
VAN WERT	C-062	532766B	GILLAND RD	Passive	60	2	40	0	5.9	13.9	0.0270	0.0392	0.0121	
VAN WERT	C-062	532767H	MENDON RD	Passive	410	2	40	0	5.9	13.9	0.0471	0.0640	0.0169	
VAN WERT	C-062	532768P	WAYNE ST	Gate	3,510	2	40	0	5.9	13.9	0.0176	0.0246	0.0070	
VAN WERT	C-062	532769W	VINE ST	Flasher	230	2	40	0	5.9	13.9	0.0126	0.0187	0.0061	
VAN WERT	C-062	532770R	FRANKLIN ST	Flasher	1,050	2	40	0	5.9	13.9	0.0217	0.0312	0.0094	
VAN WERT	C-062	532771X	CHESTNUT ST	Flasher	420	2	40	0	5.9	13.9	0.0157	0.0230	0.0073	
VAN WERT	C-062	532772E	RACE ST	Flasher	1,010	2	40	0	5.9	13.9	0.0214	0.0308	0.0093	
VAN WERT	C-062	532773L	N TYLER ST	Flasher	590	2	40	0	5.9	13.9	0.0177	0.0258	0.0081	
VAN WERT	C-062	532774T	HARRISON ST	Flasher	620	2	40	0	5.9	13.9	0.0181	0.0263	0.0082	
VAN WERT	C-062	532775A	CHERRY ST	Passive	700	2	40	0	5.9	13.9	0.0540	0.0719	0.0179	
VAN WERT	C-062	532776G	WALNUT ST	Flasher	1,150	2	40	0	5.9	13.9	0.0224	0.0321	0.0097	
VAN WERT	C-062	532778V	MARKET ST	Flasher	2,310	2	40	0	5.9	13.9	0.0284	0.0397	0.0113	
VAN WERT	C-062	532779C	WASHINGTON	Gate	7,800	2	40	0	5.9	13.9	0.0215	0.0296	0.0082	
VAN WERT	C-062	532780W	JEFFERSON ST	Flasher	1,710	2	40	0	5.9	13.9	0.0257	0.0363	0.0106	
VAN WERT	C-062	532781D	N SHANNON ST	Flasher	100	2	40	0	5.9	13.9	0.0092	0.0138	0.0046	
VAN WERT	C-062	532782K	WALL ST	Flasher	1,030	2	40	0	5.9	13.9	0.0216	0.0310	0.0094	
VAN WERT	C-062	532783S	BURT ST	Flasher	2,450	2	40	1	5.9	13.9	0.0798	0.1004	0.0206	
VAN WERT	C-062	532784Y	FISHER AVE	Flasher	670	2	40	0	5.9	13.9	0.0186	0.0269	0.0084	
VAN WERT	C-062	532785F	JOHN BROWN RD	Gate	1,980	2	40	0	5.9	13.9	0.0151	0.0214	0.0062	
VAN WERT	C-062	532788B	LIBERTY UNION RD	Passive	130	2	40	0	5.9	13.9	0.0341	0.0483	0.0142	
VAN WERT	C-062	532789H	RICHEY CR	Passive	160	2	40	0	5.9	13.9	0.0363	0.0510	0.0147	
VAN WERT	C-062	532790C	MACE CR-ROBNSN RD	Passive	60	2	40	0	5.9	13.9	0.0270	0.0392	0.0121	
VAN WERT	C-062	532791J	ALT RT US 30	Gate	1,590	2	40	0	5.9	13.9	0.0143	0.0202	0.0059	

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VAN WERT	C-062	532792R	BERGNER RD	Passive	50	2	40	0	5.9	13.9	0.0256	0.0372	0.0116	
VAN WERT	C-062	532794E	MAIN ST -SR 49	Gate	1,650	2	40	0	5.9	13.9	0.0144	0.0204	0.0060	
VAN WERT	C-062	532795L	TULLY ST	Gate	1,070	2	40	0	5.9	13.9	0.0129	0.0183	0.0054	
VAN WERT	C-062	532797A	PAYNE RD	Passive	130	2	40	0	5.9	13.9	0.0341	0.0483	0.0142	
VAN WERT	C-062	532798G	SHANER CR	Passive	40	1	40	0	5.9	13.9	0.0073	0.0113	0.0040	
VAN WERT	C-062	532799N	LARE CR	Passive	80	2	40	0	5.9	13.9	0.0295	0.0424	0.0129	
VAN WERT	C-062	532800F	MENTZER ROAD	Passive	90	2	40	0	5.9	13.9	0.0306	0.0438	0.0132	
VAN WERT	C-062	532802U	MENTZER CURCH CR	Passive	50	2	40	0	5.9	13.9	0.0256	0.0372	0.0116	
VAN WERT	C-062	532803B	CLEM CR-SPONSELLR	Passive	50	1	40	0	5.9	13.9	0.0139	0.0210	0.0071	
VAN WERT	C-062	532804H	DIOXON CAVETT	Passive	110	2	40	0	5.9	13.9	0.0325	0.0463	0.0138	
WOOD	C-065	155763R	CYGNET RD	Passive	20	2	50	0	0.6	14.2	0.0070	0.0309	0.0239	
WOOD	C-065	155764X	JERRY CITY RD	Passive	30	2	50	0	0.6	14.2	0.0081	0.0348	0.0267	
WOOD	C-065	155766L	BAYS RD	Passive	88	2	50	0	0.6	14.2	0.0117	0.0470	0.0353	
WOOD	C-065	155767T	C\'STAR RD	Flasher	230	2	50	0	0.6	14.2	0.0043	0.0190	0.0147	
WOOD	C-065	155768A	MA'IN ST	Flasher	1,380	2	50	0	0.6	14.2	0.0086	0.0345	0.0259	
WOOD	C-065	155770B	DEF.ANCE	Flasher	360	2	50	0	0.6	14.2	0.0051	0.0222	0.0171	
WOOD	C-065	155771H	RAILROAD ST	Passive	100	1	50	0	0.6	14.2	0.0063	0.0285	0.0221	
WOOD	C-065	155772P	SOUTH ST	Passive	30	1	50	0	0.6	14.2	0.0041	0.0195	0.0153	
WOOD	C-065	155773W	SUGAR S	Passi:	110	1	50	0	0.6	14.2	0.0066	0.0293	0.0228	
WOOD	C-065	155774D	MILTON R.	Passive	110	2	50	0	0.6	14.2	0.0126	0.0498	0.0372	
WOOD	C-065	155775K	MAPLEWOC D RD	Passive	50	1	50	0	0.6	14.2	0.0050	0.0229	0.0180	
WOOD	C-065	155776S	PORTAGE RD	Passive	120	2	50	0	0.6	14.2	0.0130	0.0509	0.0379	
WOOD	C-065	155778F	WESTON RD	Passive	268	2	50	0	0.6	14.2	0.0170	0.0619	0.0449	
WOOD	C-065	155779M	TAYLOR	Flasher	570	2	50	0	0.6	14.2	0.0061	0.0260	0.0198	
WOOD	C-065	155780G	MAIN	Flasher	1,260	2	50	0	0.6	14.2	0.0083	0.0335	0.0252	
WOOD	C-065	155781N	WALNUT ST	Flasher	650	2	50	0	0.6	14.2	0.0065	0.0271	0.0207	
WOOD	C-065	155782V	OAK ST	Passive	710	2	50	0	0.6	14.2	0.0201	0.0510	0.0309	
WOOD	C-065	155784J	EULER RD	Flasher	130	2	50	0	0.6	14.2	0.0034	0.0155	0.0121	
WOOD	C-065	155785R	OTSEGO RD	Gate	1,660	2	50	0	0.6	14.2	0.0058	0.0209	0.0151	
WOOD	C-065	155788L	WILLOW RD	Passive	20	1	50	0	0.6	14.2	0.0036	0.0170	0.0135	
WOOD	C-065	155789T	RANGE LINE RD	Passive	623	2	50	0	0.6	14.2	0.0224	0.0744	0.0520	0.0131
WOOD	C-065	155790M	POE RD	Passive	240	2	50	0	0.6	14.2	0.0164	0.0603	0.0439	
WOOD	C-065	155791U	LONG JUDSON RD	Passive	80	1	50	0	0.6	14.2	0.0059	0.0266	0.0207	
WOOD	C-065	155792B	TULLER RD	Passive	160	2	50	0	0.6	14.2	0.0143	0.0547	0.0404	
WOOD	C-065	155793H	TULLER RD	Passive	60	1	50	0	0.6	14.2	0.0053	0.0243	0.0190	
WOOD	C-065	155794P	KELLOGG RD	Passive	1,510	2	50	0	0.6	14.2	0.0295	0.0878	0.0583	0.0181
WOOD	C-065	155795W	LINCOLN ST	Passive	126	2	50	0	0.6	14.2	0.0132	0.0516	0.0383	
WOOD	C-065	155796D	WALL ST & BROAD	Flasher	280	2	50	0	0.6	14.2	0.0046	0.0204	0.0157	
WOOD	C-065	155797K	MAIN	Flasher	480	2	50	0	0.6	14.2	0.0057	0.0245	0.0188	

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WOOD	C-065	155798S	WASHINGTON ST	Passive	540	2	50	0	0.6	14.2	0.0214	0.0722	0.0508	0.0124
WOOD	C-065	155799Y	TONTOGANY RD	Passive	510	2	50	0	0.6	14.2	0.0210	0.0714	0.0503	0.0122
WOOD	C-065	155800R	HANNAH	Passive	70	2	50	0	0.6	14.2	0.0108	0.0442	0.0334	
WOOD	C-065	155801X	CROSS CREEK	Passive	110	2	50	0	0.6	14.2	0.0126	0.0498	0.0372	
WOOD	C-065	155804T	MIDDLETOWN PIKE	Passive	690	2	50	1	0.6	14.2	0.0746	0.1696	0.0950	0.0136
WOOD	C-065	155805A	FINDLAY ST	Flasher	2,010	2	50	0	0.6	14.2	0.0100	0.0387	0.0287	
WOOD	C-065	155806G	MAIN ST	Flasher	240	2	50	0	0.6	14.2	0.0044	0.0193	0.0149	
WOOD	C-065	155807N	CHURCH RD	Passive	130	1	50	0	0.6	14.2	0.0070	0.0308	0.0239	
WOOD	C-065	155808V	KINGS RD	Passive	220	2	50	0	0.6	14.2	0.0159	0.0591	0.0432	
WOOD	C-065	155809C	OVITT RD	Passive	150	2	50	0	0.6	14.2	0.0140	0.0539	0.0398	
WOOD	C-065	155810W	REITZ RD	Passive	310	2	50	0	0.6	14.2	0.0179	0.0640	0.0461	
WOOD	C-065	155811D	HULL PRAIRIE RD	Passive	120	2	50	0	0.6	14.2	0.0130	0.0509	0.0379	
WOOD	C-065	155812K	FIRE POINT RD	Passive	670	2	50	0	0.6	14.2	0.0229	0.0755	0.0525	0.0135
WOOD	C-065	155814Y	ROACHTON RD	Passive	1,270	2	50	0	0.6	14.2	0.0280	0.0852	0.0572	0.0170
WOOD	C-065	155815F	FORT MEIGS RD	Passive	430	2	50	0	0.6	14.2	0.0199	0.0688	0.0489	
WOOD	C-065	155818B	ECKEL JCT RD	Passive	1,160	2	50	0	0.6	14.2	0.0272	0.0838	0.0566	0.0164
WOOD	C-065	155819H	ECKEL RD	Passive	570	2	50	0	0.6	14.2	0.0218	0.0730	0.0512	0.0127
WOOD	C-065	155820C	ECKEL RD	Passive	760	2	50	0	0.6	14.2	0.0239	0.0774	0.0535	0.0141
WOOD	C-065	155821J	W BOUNDARY ST	Gate	12,870	4	25	1	0.6	14.2	0.0506	0.1015	0.0510	a
WOOD	C-065	155822R	MULBERRY ST	Passive	340	2	25	0	0.6	14.2	0.0155	0.0579	0.0424	
WOOD	C-065	155823X	INDIANA ST	Gate	6,288	2	25	0	0.6	14.2	0.0084	0.0288	0.0204	
WOOD	C-065	155825L	CHERRY ST	Passive	360	1	25	0	0.6	14.2	0.0083	0.0357	0.0274	
WOOD	C-065	155827A	WALNUT ST	Flasher	1,690	2	25	0	0.6	14.2	0.0093	0.0367	0.0274	
WOOD	C-065	155829N	LOUISIANA AVE	Gate	7,170	4	25	0	0.6	14.2	0.0113	0.0367	0.0255	
WOOD	C-065	155830H	ELM ST	Flasher	3,750	2	25	0	0.6	14.2	0.0126	0.0462	0.0336	
WOOD	C-065	155831P	LOCUST ST	Flasher	1,200	2	25	0	0.6	14.2	0.0082	0.0330	0.0248	
WOOD	C-065	155832W	MAPLE ST	Passive	370	2	25	0	0.6	14.2	0.0159	0.0591	0.0432	
WOOD	C-065	155833D	HICKORY ST	Passive	580	2	25	0	0.6	14.2	0.0185	0.0656	0.0471	
WOOD	C-065	155834K	E BOUNDARY ST	Flasher	4,420	2	25	0	0.6	14.2	0.0134	0.0483	0.0349	
WOOD	C-065	155835S	HUFFORD RD	Passive	690	2	30	0	0.6	14.2	0.0203	0.0697	0.0494	
WOOD	C-065	155837F	WHITE RD	Passive	630	2	30	0	0.6	14.2	0.0197	0.0683	0.0486	
WOOD	C-065	155838M	FORD RD	Passive	1,960	2	30	0	0.6	14.2	0.0282	0.0855	0.0573	0.0171
WOOD	C-065	155839U	BATES RD	Passive	940	2	30	0	0.6	14.2	0.0224	0.0743	0.0519	0.0131
WOOD	C-065	155840N	SCHRICK RD	Passive	1,370	2	20	0	0.6	14.2	0.0236	0.0768	0.0532	0.0139
WOOD	C-065	155841V	LIME CITY RD	Gate	4,060	2	20	0	0.6	14.2	0.0074	0.0260	0.0186	
WOOD	C-065	155842C	GLENWOOD RD	Flasher	1,460	2	20	0	0.6	14.2	0.0088	0.0349	0.0261	
WOOD	N-077	509417H	MAIN	Gate	1,110	2	60	1	48.0	61.5	0.0871	0.0926	0.0054	
WOOD	N-077	509418P	CHERRY	Gate	310	2	60	1	48.0	61.5	0.0718	0.0762	0.0044	
WOOD	N-077	509419W	BRADNER	Flasher	830	2	60	0	48.0	61.5	0.0525	0.0568	0.0043	

Table 5-OH-8
Ohio
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
WOOD	N-077	509420R	AYRES	Passive	366	2	60	0	48.0	61.5	0.0960	0.1014	0.0054	
WOOD	N-077	509421X	MATTHEWS RD	Passive	77	1	60	0	48.0	61.5	0.0464	0.0511	0.0046	
WOOD	N-077	509422E	PEMBERVILLE	Gate	1,141	2	60	0	48.0	61.5	0.0337	0.0367	0.0030	
WOOD	N-077	509423L	WALBRIDGE	Gate	3,549	2	60	0	48.0	61.5	0.0428	0.0463	0.0035	
WOOD	N-077	509424T	LAMOYNE RD	Gate	2,650	2	60	0	48.0	61.5	0.0403	0.0437	0.0034	
WOOD	N-077	509854D	WALES	Gate	2,890	2	60	0	48.0	61.5	0.0409	0.0443	0.0034	
WOOD	N-077	509855K	DROUILLARD	Gate	5,770	2	60	0	48.0	61.5	0.0469	0.0505	0.0036	
WYANDOT	C-062	532599E	COUNTY LINE ROAD	Passive	80	2	50	0	5.9	13.9	0.0314	0.0449	0.0135	
WYANDOT	C-062	532601D	AYERS ST	Flasher	200	1	50	0	5.9	13.9	0.0101	0.0151	0.0050	
WYANDOT	C-062	532602K	MAIN ST	Flasher	1,720	4	50	0	5.9	13.9	0.0343	0.0469	0.0127	
WYANDOT	C-062	532603S	ALLEY-MORRISON	Passive	20	1	50	0	5.9	13.9	0.0109	0.0166	0.0058	
WYANDOT	C-062	532605F	GOODBREAD ST	Passive	250	1	50	0	5.9	13.9	0.0251	0.0366	0.0115	
WYANDOT	C-062	532606M	EDENVILLE ROAD	Passive	90	1	50	0	5.9	13.9	0.0181	0.0270	0.0089	
WYANDOT	C-062	532608B	DOUGLAS RD	Passive	90	1	50	0	5.9	13.9	0.0181	0.0270	0.0089	
WYANDOT	C-062	532610C	ROCK RUN CROSSING	Passive	80	1	50	0	5.9	13.9	0.0174	0.0260	0.0086	
WYANDOT	C-062	532613X	WILLIAMS CR	Passive	190	2	50	0	5.9	13.9	0.0404	0.0561	0.0157	
WYANDOT	C-062	532617A	RESERVIOR RD	Passive	340	1	40	0	5.9	13.9	0.0259	0.0377	0.0118	
WYANDOT	C-062	532618G	S. FIFTH ST	Flasher	630	2	40	0	5.9	13.9	0.0182	0.0264	0.0082	
WYANDOT	C-062	532619N	S. SANDUSKY ST	Gate	4,080	2	40	0	5.9	13.9	0.0182	0.0255	0.0072	
WYANDOT	C-062	532620H	SEVENTH ST	Flasher	1,650	2	40	1	5.9	13.9	0.0734	0.0923	0.0189	
WYANDOT	C-062	532622W	EIGHTH ST	Gate	4,350	2	40	0	5.9	13.9	0.0185	0.0259	0.0073	
WYANDOT	C-062	532623D	HAZEL ST	Flasher	760	2	40	0	5.9	13.9	0.0194	0.0281	0.0087	
WYANDOT	C-062	532624K	S. WARPOLE ST	Flasher	2,230	2	40	0	5.9	13.9	0.0280	0.0393	0.0112	
WYANDOT	C-062	532625S	TOWNSHIP ROAD	Passive	210	1	40	0	5.9	13.9	0.0222	0.0327	0.0105	
WYANDOT	C-062	532626Y	WHITE RD	Passive	220	2	40	0	5.9	13.9	0.0397	0.0553	0.0155	
WYANDOT	C-062	532629U	WILL RD	Passive	70	1	40	0	5.9	13.9	0.0155	0.0234	0.0078	
WYANDOT	C-062	532630N	MIGRET RD (CR 53)	Passive	130	2	40	0	5.9	13.9	0.0341	0.0483	0.0142	
WYANDOT	C-062	532633J	GAMBER RD	Passive	80	1	40	0	5.9	13.9	0.0162	0.0244	0.0081	
WYANDOT	C-062	532635X	KRAUS RD	Passive	90	1	40	0	5.9	13.9	0.0169	0.0253	0.0084	
WYANDOT	C-062	532638T	MAIN ST	Flasher	950	2	40	0	5.9	13.9	0.0210	0.0302	0.0092	
WYANDOT	C-062	532639A	PUBLIC ALLEY	Passive	40	1	40	0	5.9	13.9	0.0128	0.0195	0.0067	
WYANDOT	C-062	532640U	LILES CR	Passive	60	1	40	0	5.9	13.9	0.0147	0.0222	0.0075	
WYANDOT	C-062	532641B	HELLER RD	Passive	60	2	40	0	5.9	13.9	0.0270	0.0392	0.0121	
WYANDOT	C-062	532645D	ANGLING RD	Passive	50	2	40	0	5.9	13.9	0.0256	0.0372	0.0116	
WYANDOT	C-070	228737F	TWPO 125	Passive	160	1	50	0	17.8	27.4	0.0357	0.0428	0.0070	
WYANDOT	C-070	228739U	WYANDOT STREET	Flasher	970	2	50	0	17.8	27.4	0.0340	0.0401	0.0061	
WYANDOT	C-070	228740N	SEARS	Gate	1,000	2	50	0	17.8	27.4	0.0199	0.0236	0.0037	
WYANDOT	C-070	228741V	TR 65	Passive	30	1	50	0	17.8	27.4	0.0214	0.0261	0.0048	

Table 5-OH-8
Ohio
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
WYANDOT	C-070	228742C	TR 62	Passive	20	1	50	0	17.8	27.4	0.0109	0.0135	0.0026	
WYANDOT	C-070	228743J	CR 58	Passive	90	1	50	0	17.8	27.4	0.0301	0.0364	0.0062	
WYANDOT	C-070	228744R	OHO 6700	Flasher	1,820	2	50	0	17.8	27.4	0.0406	0.0473	0.0067	
WYANDOT	C-070	228745X	CR 57	Passive	250	2	50	0	17.8	27.4	0.0651	0.0746	0.0094	
WYANDOT	C-070	228747L	O'DONNEL ST.	Passive	40	1	50	1	17.8	27.4	0.0751	0.0844	0.0092	
WYANDOT	C-070	228748T	W. HICKS ST.	Passive	30	1	50	1	17.8	27.4	0.0714	0.0800	0.0086	
WYANDOT	C-070	228749A	W. JOHNSON ST.	Flasher	750	2	50	0	17.8	27.4	0.0309	0.0367	0.0057	
WYANDOT	C-070	228750U	W. WYANDOT ST.	Gate	160	2	50	3	17.8	27.4	0.1226	0.1310	0.0084	
WYANDOT	C-070	228751B	W. WALKER ST.	Passive	140	1	50	0	17.8	27.4	0.0344	0.0412	0.0068	
WYANDOT	C-070	228752H	US 30	Gate	5,600	2	50	0	17.8	27.4	0.0301	0.0351	0.0050	
WYANDOT	C-070	228754W	CR 49	Gate	440	1	50	0	17.8	27.4	0.0142	0.0170	0.0028	
WYANDOT	C-070	228756K	C004700	Passive	290	2	50	0	17.8	27.4	0.0673	0.0768	0.0095	
WYANDOT	C-070	228757S	TWP 0440	Passive	300	2	50	0	17.8	27.4	0.0678	0.0773	0.0095	
WYANDOT	C-070	228759F	TR 42	Passive	280	1	50	1	17.8	27.4	0.1083	0.1223	0.0140	
WYANDOT	C-070	228761G	C000400	Passive	140	1	50	0	17.8	27.4	0.0344	0.0412	0.0068	
WYANDOT	C-070	228762N	TWP0103	Passive	640	2	50	0	17.8	27.4	0.0792	0.0889	0.0097	
WYANDOT	C-070	228763V	TWP0980	Passive	680	2	50	0	17.8	27.4	0.0801	0.0898	0.0097	
WYANDOT	C-070	228764C	FINDLAY STREET	Gate	4,090	2	50	0	17.8	27.4	0.0315	0.0366	0.0051	
WYANDOT	C-070	228765J	PATTERSON STREET	Flasher	1,450	2	50	0	17.8	27.4	0.0434	0.0504	0.0070	
WYANDOT	C-070	228766R	US02300	Gate	4,490	2	50	0	17.8	27.4	0.0321	0.0373	0.0052	
WYANDOT	C-070	228769L	C000300	Passive	170	1	50	0	17.8	27.4	0.0371	0.0443	0.0072	

a Improvements in accident rate with four-quadrant gates or roadway median not quantifiable.

Table 5-OH-11
Ohio
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

						Pre Acquisition								*Post Acquisition*								
County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Allen	C-062	532707Y	N. JACKSON ST.	2	6,200	5.9	35	5,600	59	14	2.69	3.07	A	13.9	35	6,200	150	16	2.92	8.50	B	
Allen	C-062	532710G	MAIN ST.	4	8,860	5.9	35	5,600	84	10	2.57	2.93	A	13.9	35	6,200	215	11	2.79	8.12	B	
Allen	C-062	532714J	N. METCALF ST.	2	7,850	5.9	35	5,600	75	18	2.82	3.21	A	13.9	35	6,200	190	20	3.05	8.88	B	
Allen	C-062	532719T	COLE ST.	2	7,300	5.9	35	5,600	69	17	2.77	3.16	A	13.9	35	6,200	177	18	3.01	8.75	B	
Allen	C-062	532720M	CABLE RD.	5	18,680	5.9	40	5,600	160	16	2.51	2.58	A	13.9	40	6,200	408	17	2.72	7.12	B	
Allen	C-062	532722B	EASTTOWN RD.	2	12,300	5.9	50	5,600	89	22	2.45	2.14	A	13.9	50	6,200	227	23	2.64	5.84	B	
Allen	C-062	532703W	ROUSH CROSSING	5	7,260	5.9	40	5,600	62	6	2.24	2.30	A	13.9	40	6,200	158	7	2.42	6.34	B	
Ashtabula	C-060	523885L	BROADWAY AVE.	2	6,140	48.3	50	5,600	365	11	2.06	14.67	B	54.2	50	6,200	441	12	2.22	19.09	C	
Ashtabula	N-070	471972T	LAKE ST.	2	5,500	13.0	50	4,869	80	9	1.83	3.19	A	25.2	50	5,000	158	9	1.87	6.42	B	
Ashtabula	N-070	471983Y	MAIN AVE.	4	5,350	13.0	35	4,869	101	6	2.21	4.99	A	25.2	35	5,000	199	6	2.26	10.07	B	
Ashtabula	N-075	471989W	WEST AVE.	2	8,000	13.0	35	4,869	150	17	2.54	5.72	B	36.6	35	5,000	432	17	2.59	16.77	C	
Ashtabula	N-075	472008G	BROADWAY AVE.	2	7,320	13.0	50	4,869	106	12	1.92	3.35	A	36.6	50	5,000	304	12	1.96	9.77	B	
Butler	C-063	152382S	MUHLHAUSER	2	7,030	28.2	40	6,000	304	15	2.62	13.56	B	31.2	40	6,200	344	16	2.69	15.79	C	
Butler	C-063	152389P	SYMMES RD	2	6,210	28.2	40	6,000	268	14	2.56	13.27	B	31.2	40	6,200	304	14	2.63	15.45	C	
Butler	C-063	152392X	LAUREL ST	2	6,860	28.2	35	6,000	329	17	2.90	16.65	C	31.2	35	6,200	374	17	2.97	19.41	C	
Butler	C-063	152394L	CENTRAL	2	5,890	28.2	35	6,000	282	14	2.82	16.23	C	31.2	35	6,200	321	15	2.90	18.92	C	
Butler	C-063	152407K	VINE ST.	2	7,030	28.2	20	6,000	538	27	4.64	42.65	E	31.2	20	6,200	613	28	4.78	49.97	E	E (b)
Butler	N-078	524698G	TYLERSVILLE RD	2	11,590	11.7	40	5,600	197	24	2.83	5.77	B	18.9	40	5,000	292	22	2.60	7.86	B	
Butler	N-078	524677N	CENTRAL	2	8,740	11.7	25	5,600	216	27	3.79	11.25	B	18.9	25	5,000	318	24	3.45	15.07	C	
Butler	N-078	524678V	FIRST ST	2	7,430	11.7	25	5,600	184	23	3.66	10.86	B	18.9	25	5,000	270	21	3.33	14.54	B	
Crawford	C-062	532583H	N SANDUSKY AVE	2	9,710	5.9	35	5,600	92	23	2.97	3.38	A	13.9	35	6,200	236	24	3.22	9.36	B	
Crawford	C-062	532588S	MANSFIELD ST	2	8,480	5.9	35	5,600	81	20	2.87	3.26	A	13.9	35	6,200	206	21	3.11	9.04	B	
Crawford	C-067	518443W	MAIN ST	2	12,030	14.5	40	5,600	253	25	2.87	7.24	B	31.3	40	6,200	591	27	3.10	18.29	C	
Crawford	N-073	481561P	HOPLEY	2	6,030	26.0	50	4,869	175	10	1.86	6.47	B	34.3	45	5,000	253	11	2.04	10.27	B	
Cuyahoga	C-061	524363S	BAGLEY RD	4	10,950	14.5	50	5,600	195	10	2.02	4.33	A	54.2	50	6,200	787	10	2.18	18.77	C	
Cuyahoga	C-061	524367U	COLUMBIA RD	2	7,240	14.5	50	5,600	129	13	2.12	4.53	A	54.2	50	6,200	520	14	2.28	19.66	C	
Cuyahoga	C-074	523971H	HUMMEL RD	2	5,560	13.4	35	5,600	120	13	2.65	6.86	B	47.3	35	6,200	459	14	2.87	28.44	D	C (d)
Cuyahoga	C-074	523973W	ENGLE RD	4	15,100	13.4	35	5,600	326	18	2.79	7.23	B	47.3	35	6,200	1246	19	3.03	29.98	D	C (d)
Cuyahoga	N-075	472098H	LONDON RD	2	5,310	13.0	35	4,869	100	11	2.36	5.33	B	36.6	35	5,000	287	11	2.41	15.61	C	
Cuyahoga	N-075	472093Y	DILLE RD	2	15,430	13.0	50	4,869	224	25	2.46	4.28	A	36.6	50	5,000	642	25	2.51	12.51	B	
Cuyahoga	N-080	472187A	WEST 110 ST	2	5,970	13.5	35	4,869	116	12	2.40	5.63	B	34.1	35	5,000	300	13	2.45	14.80	B	
Cuyahoga	N-080	472192W	WEST 117 ST.	4	15,610	13.5	35	4,869	305	16	2.52	5.91	B	34.1	35	5,000	785	17	2.58	15.54	C	
Cuyahoga	N-080	472201T	BUNTS RD	2	5,300	13.5	35	4,869	103	11	2.36	5.53	B	34.1	35	5,000	266	11	2.41	14.54	B	
Cuyahoga	N-080	472245T	COLUMBIA RD	2	11,320	13.5	50	4,869	170	18	2.16	3.90	A	34.1	50	5,000	439	19	2.20	10.21	B	
Cuyahoga	N-080	472248N	DOVER CENTER RD	2	7,630	13.5	50	4,869	[illegible]	12	1.94	3.50	A	34.1	50	5,000	296	12	1.98	9.18	B	
Cuyahoga	N-080	472252D	BRADLEY RD	2	5,670	13.5	50	4,869	85	9	1.84	3.33	A	34.1	50	5,000	220	9	1.88	8.72	B	
Defiance	C-066	142356A	OTTAWA AVE	2	10,120	21.4	50	6,000	280	19	2.41	8.02	B	47.7	50	6,200	640	19	2.47	18.75	C	
Defiance	C-066	142375E	U.S. 24	2	5,910	21.4	50	6,000	164	11	2.15	7.14	B	47.7	50	6,200	374	11	2.20	16.70	C	
Erie	N-072	472306G	WATER ST	2	6,260	15.6	50	4,869	109	10	1.87	3.90	A	27.0	50	5,000	192	10	1.90	7.01	B	
Erie	N-072	472308V	STATE ST	2	5,330	15.6	50	4,869	93	9	1.83	3.81	A	27.0	45	5,000	176	9	2.00	7.94	B	
Erie	N-085	481668S	SR 101 TIFFIN	2	5,950	1.4	15	4,869	24	25	4.84	2.36	A	11.7	15	5,000	207	26	4.95	20.69	C	
Franklin	N-073	481472X	LINCOLN	2	9,810	26.0	40	4,869	334	18	2.42	9.86	B	34.3	40	5,000	449	19	2.46	13.52	B	
Franklin	N-073	481467B	WEBER	2	8,678	26.0	40	4,869	295	16	2.34	9.55	B	34.3	35	5,000	439	18	2.64	16.01	C	
Franklin	N-073	481470J	COOK	2	11,424	26.0	40	4,869	388	22	2.54	10.34	B	34.3	40	5,000	523	22	2.59	14.19	B	
Hamilton	C-063	152346W	WINTON RD	4	21,820	28.2	20	6,000	1670	43	5.18	47.58	E	31.2	20	6,200	1902	44	5.33	55.75	E	E (b)
Hamilton	C-063	152347D	MITCHELL AVE.	2	14,930	28.2	20	6,000	1143	58	5.89	54.07	E	31.2	20	6,200	1301	60	6.06	63.35	F	F (b)
Hamilton	C-063	152355V	TOWNSHIP AVE	2	9,270	28.2	20	6,000	710	36	4.94	45.36	E	31.2	20	6,200	808	37	5.08	53.15	E	E (b)

Table 5-OH-11
Ohio
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

						Pre Acquisition								*Post Acquisition*								
County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Hamilton	C-063	152356C	SEYMOUR	2	6,560	28.2	35	6,000	314	16	2.87	16.52	C	31.2	35	6,200	357	16	2.95	19.26	C	
Hamilton	C-063	152357J	NORTHBEND	2	6,360	28.2	35	6,000	305	16	2.86	16.43	C	31.2	35	6,200	346	16	2.93	19.16	C	
Hamilton	C-063	152368W	WYOMING AVE	2	7,210	28.2	35	6,000	346	18	2.92	16.81	C	31.2	35	6,200	393	18	3.00	19.59	C	
Hamilton	C-063	152370X	MARION RD	2	6,260	28.2	35	6,000	300	15	2.85	16.39	C	31.2	35	6,200	341	16	2.93	19.11	C	
Hamilton	C-063	152376N	SHARON RD	3	14,040	28.2	35	6,000	673	23	3.10	17.84	C	31.2	35	6,200	764	24	3.18	20.79	C	
Hamilton	C-063	152380D	PRINCETON PIKE	4	25,630	28.2	35	6,000	1229	31	3.44	19.79	C	31.2	35	6,200	1396	32	3.53	23.07	C	
Hamilton	C-063	152381K	CRESENTVILLE RD	4	8,740	28.2	35	6,000	419	11	2.72	15.61	C	31.2	35	6,200	476	11	2.79	18.20	C	
Hamilton	N-076	524743Y	VINE ST	4	8,560	33.9	35	5,600	467	10	2.57	16.79	C	38.6	35	5,000	487	9	2.35	16.04	C	
Hamilton	N-076	524746U	BEECH ST	2	11,060	33.9	35	5,600	604	26	3.09	20.21	C	38.6	35	5,000	630	23	2.83	19.30	C	
Hamilton	N-078	524719X	SMALLEY RD	2	9,680	11.7	35	5,600	182	22	2.96	6.70	B	18.9	35	5,000	270	21	2.72	9.08	B	
Hamilton	N-078	524707D	HAUCK RD	2	6,200	11.7	35	5,600	117	14	2.69	6.09	B	18.9	35	5,000	173	13	2.47	8.25	B	
Hamilton	N-078	524712A	KEMPER RD	2	5,980	11.7	35	5,600	113	14	2.68	6.05	B	18.9	35	5,000	167	13	2.45	8.20	B	
Hamilton	N-078	524713G	READING RD	4	11,820	11.7	35	5,600	223	14	2.67	6.04	B	18.9	35	5,000	329	13	2.45	8.19	B	
Hamilton	N-078	524740D	TOWNSHIP AVE	2	7,520	11.7	35	5,600	142	17	2.79	6.30	B	18.9	35	5,000	210	16	2.56	8.55	B	
Hamilton	N-078	524722F	WYOMING ST	2	9,270	11.7	35	5,600	175	21	2.93	6.62	B	18.9	35	5,000	258	20	2.68	8.97	B	
Hamilton	N-078	524742S	MURRAY ST	3	5,830	11.7	35	5,600	110	9	2.54	5.74	B	18.9	35	5,000	162	8	2.33	7.78	B	
Hardin	C-062	532679X	MAIN ST	2	6,310	5.9	40	5,600	54	13	2.44	2.50	A	13.9	40	6,200	138	14	2.64	6.90	B	
Huron	C-067	518481F	MAIN ST	2	5,100	14.5	50	5,600	91	9	2.00	4.29	A	31.3	45	6,200	229	11	2.33	12.57	B	
Lake	C-060	523829E	LAKE ST SR 528	2	8,810	48.3	50	5,600	524	16	2.21	15.77	C	54.2	50	6,200	633	17	2.38	20.53	C	
Lake	C-060	523803C	HOPKINS RD	2	8,850	48.3	50	5,600	526	16	2.21	15.79	C	54.2	50	6,200	636	17	2.38	20.55	C	
Lake	C-060	523800G	PELTON RD	2	5,650	48.3	50	5,600	336	10	2.03	14.49	B	54.2	50	6,200	406	11	2.19	18.85	C	
Lake	C-060	523793Y	ERIE ST	2	8,300	48.3	50	5,600	494	15	2.18	15.55	C	54.2	50	6,200	596	16	2.35	20.24	C	
Lake	C-060	523791K	BEIDLER RD-E361ST	2	5,450	48.3	50	5,600	324	10	2.02	14.41	B	54.2	50	6,200	392	10	2.18	18.76	C	
Lake	C-060	523789J	E. 305TH ST	2	11,170	48.3	50	5,600	664	20	2.37	16.89	C	54.2	50	6,200	803	21	2.55	21.98	C	
Lake	C-060	523787V	LLOYD RD	2	7,400	48.3	50	5,600	440	13	2.13	15.17	C	54.2	50	6,200	532	14	2.29	19.74	C	
Lake	N-075	472017F	LAKE ST	2	8,810	13.0	50	4,869	128	14	2.00	3.49	A	36.6	50	5,000	366	14	2.04	10.18	B	
Lake	N-075	472039F	LIBERTY ST	2	7,580	13.0	35	4,869	142	16	2.51	5.65	B	36.6	35	5,000	409	16	2.56	16.57	C	
Lake	N-075	472040A	CHESTNUT ST	2	5,980	13.0	35	4,869	112	12	2.40	5.42	B	36.6	35	5,000	323	13	2.45	15.88	C	
Lake	N-075	472044C	MENTOR AVE	4	19,260	13.0	50	4,869	279	15	2.05	3.57	A	36.6	50	5,000	801	16	2.09	10.42	B	
Lake	N-075	472045J	JACKSON ST	2	5,230	13.0	50	4,869	76	8	1.82	3.17	A	36.6	50	5,000	218	9	1.85	9.25	B	
Lake	N-075	472046R	HEISLEY RD	2	6,360	13.0	50	4,869	92	10	1.88	3.26	A	36.6	50	5,000	265	10	1.91	9.53	B	
Lake	N-075	472048E	HOPKINS RD	2	5,460	13.0	50	4,869	79	9	1.83	3.19	A	36.6	50	5,000	227	9	1.87	9.31	B	
Lake	N-075	472056W	ERIE ST	2	8,570	13.0	50	4,869	124	14	1.99	3.46	A	36.6	50	5,000	356	14	2.03	10.12	B	
Lake	N-075	472064N	RUSH RD	4	6,164	13.0	50	4,869	89	5	1.73	3.00	A	36.6	50	5,000	256	5	1.76	8.77	B	
Lake	N-075	472068R	LLOYD RD	2	7,400	13.0	35	4,869	139	15	2.50	5.63	B	36.6	35	5,000	399	16	2.55	16.49	C	
Lorain	C-061	518535J	TWNSBRG-ELYRIA RD	2	6,020	14.5	50	5,600	107	11	2.05	4.39	A	54.2	50	6,200	433	11	2.21	19.03	C	
Lorain	C-061	518530A	MAIN ST	2	5,750	14.5	40	5,600	121	12	2.40	6.07	B	54.2	40	6,200	489	13	2.60	26.52	D	C (e)
Lorain	C-061	518510N	NO. MAIN ST	2	8,120	14.5	50	5,600	145	14	2.17	4.64	A	54.2	50	6,200	583	16	2.34	20.14	C	
Lorain	C-061	518509U	HERRICK AVE	2	7,870	14.5	50	5,600	140	14	2.15	4.61	A	54.2	50	6,200	566	15	2.32	20.00	C	
Lorain	N-080	472258U	AVON CENTER RD	2	6,700	13.5	50	4,869	101	11	1.89	3.42	A	34.1	50	5,000	260	11	1.93	8.96	B	
Lorain	N-080	472269G	MILLER RD	2	5,110	13.5	50	4,869	77	8	1.82	3.28	A	34.1	50	5,000	198	8	1.85	8.59	B	
Lorain	N-080	472286X	COLORADO AVE	2	6,270	13.5	35	4,869	122	13	2.42	5.67	B	34.1	35	5,000	315	13	2.47	14.91	B	
Lorain	N-080	472292B	OBERLIN AVE	2	11,060	13.5	35	4,869	216	23	2.77	6.48	B	34.1	35	5,000	556	23	2.83	17.05	C	
Lorain	N-080	472293H	LEAVITT RD	2	9,660	13.5	50	4,869	145	16	2.05	3.71	A	34.1	50	5,000	374	16	2.09	9.72	B	
Lucas	C-040	232121N	DIXIE (DETROIT)	4	5,290	21.9	40	6,000	177	6	2.34	9.43	B	33.1	40	6,200	275	6	2.40	14.99	B	
Lucas	N-077	509436M	OAKDALE AVE	2	5,970	48.0	50	5,600	353	11	2.05	14.52	B	61.5	50	5,000	417	10	1.89	15.85	C	
Mahoning	C-081	141681T	BRIDGE ST	2	7,840	32.6	45	6,000	358	16	2.45	13.39	B	39.6	45	6,200	445	16	2.51	17.09	C	

Table 5-OH-11
Ohio
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

						Pre Acquisition								*Post Acquisition*								
County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Mahoning	N-082	544716G	HUBBARD RD	2	7,698	11.7	30	5,600	164	20	3.17	8.10	B	23.8	30	6,200	362	22	3.45	19.46	C	
Marion	C-071	518415T	CENTER ST	2	6,550	16.1	40	5,600	153	14	2.45	6.88	B	31.8	40	6,200	327	15	2.65	15.89	C	
Marion	N-073	481538V	SILVER	2	6,380	26.0	30	4,869	270	15	2.74	13.90	B	34.3	30	5,000	364	15	2.80	19.12	C	
Marion	N-073	481541D	N. MAIN SR 4	2	8,770	26.0	50	4,869	254	14	2.00	6.97	B	34.3	50	5,000	342	14	2.04	9.53	B	
Marion	N-073	481530R	BARKS	2	7,120	26.0	35	4,869	268	15	2.48	11.17	B	34.3	35	5,000	360	15	2.53	15.34	C	
Marion	N-073	481531X	PROSPECT	2	8,880	26.0	35	4,869	334	18	2.60	11.72	B	34.3	35	5,000	449	19	2.65	16.10	C	
Marion	N-073	481532E	BELLEFOUNTAINE	3	11,740	26.0	30	4,869	497	18	2.85	14.45	B	34.3	30	5,000	669	19	2.91	19.88	C	
Marion	N-073	481536G	CENTER	4	8,290	26.0	30	4,869	351	10	2.59	13.13	B	34.3	30	5,000	473	10	2.64	18.06	C	
Montgomery	N-078	524622B	WASHINGTON ST	2	7,403	11.7	40	5,600	126	15	2.51	5.11	B	18.9	40	5,000	187	14	2.30	6.97	B	
Montgomery	N-078	524628S	W STEWARD AVE	2	5,110	11.7	30	5,600	109	13	2.96	7.57	B	18.9	30	5,000	161	12	2.71	10.20	B	
Montgomery	N-078	524638X	SELLARS	4	11,390	11.7	40	5,600	194	12	2.40	4.89	A	18.9	40	5,000	287	11	2.20	6.69	B	
Montgomery	N-078	524641F	ALEX BELL RD	2	10,460	11.7	40	5,600	178	22	2.73	5.57	B	18.9	40	5,000	264	20	2.51	7.60	B	
Montgomery	N-078	524644B	ALEX RD	4	11,700	11.7	40	5,600	199	12	2.41	4.91	A	18.9	40	5,000	295	11	2.21	6.69	B	
Montgomery	N-078	524645H	ELM ST	2	5,240	11.7	40	5,600	89	11	2.37	4.83	A	18.9	40	5,000	132	10	2.18	6.58	B	
Montgomery	N-078	524654G	CENTRAL	2	11,420	11.7	40	5,600	194	24	2.81	5.74	B	18.9	40	5,000	288	22	2.59	7.82	B	
Montgomery	N-078	524657C	LINDEN AVE	2	5,420	11.7	40	5,600	92	11	2.38	4.85	A	18.9	40	5,000	137	10	2.19	6.61	B	
Ottawa	N-079	473754T	WATER ST	2	7,530	7.7	35	4,869	84	16	2.51	3.34	A	27.2	35	5,000	302	16	2.56	12.30	B	
Richland	C-067	518458L	NO. GAMBLE	2	7,630	14.5	50	5,600	136	14	2.14	4.58	A	31.3	50	6,200	317	15	2.31	11.47	B	
Richland	C-067	518456X	MAIN ST	2	8,700	14.5	50	5,600	155	15	2.20	4.72	A	31.3	50	6,200	361	17	2.37	11.82	B	
Sandusky	N-079	473668W	KILBOURNE	2	9,330	7.7	25	4,869	135	25	3.43	5.98	B	27.2	25	5,000	489	26	3.51	22.05	C	
Sandusky	N-079	473687B	MAIN ST.	2	7,230	7.7	35	4,869	80	15	2.49	3.32	A	27.2	35	5,000	290	15	2.54	12.20	B	
Sandusky	N-079	473711A	STATE	4	19,380	7.7	25	4,869	281	26	3.47	6.04	B	27.2	25	5,000	1015	27	3.55	22.28	C	
Seneca	N-071	481606U	US 224	2	5,270	26.0	50	4,869	153	8	1.82	6.34	B	34.6	50	5,000	207	9	1.86	8.76	B	
Stark	N-084	503008V	PATTERSON	2	5,190	26.4	35	5,600	219	12	2.62	13.37	B	30.1	35	5,000	229	11	2.40	12.79	B	
Summit	N-084	503541T	STOW RD	2	6,390	26.4	50	5,600	208	11	2.07	8.07	B	30.1	50	5,000	219	10	1.91	7.84	B	
Van Wert	C-062	532779C	WASHINGTON	2	7,800	5.9	35	5,600	74	18	2.81	3.20	A	13.9	35	6,200	159	20	3.05	8.87	B	
Warren	N-078	524665U	CARLISLE	2	5,490	11.7	40	5,600	93	11	2.39	4.86	A	18.9	40	5,000	138	11	2.19	6.63	B	
Wood	C-065	155821J	BOUNDARY (WEST)	4	12,870	0.6	25	6,000	17	21	3.77	0.61	A	14.2	25	6,200	421	21	3.88	15.23	C	
Wood	C-065	155823X	INDIANA ST	2	6,288	0.6	25	6,000	8	20	3.76	0.61	A	14.2	25	6,200	206	21	3.87	15.17	C	
Wood	C-065	155829N	LOUISIANA	4	7,170	0.6	25	6,000	10	12	3.51	0.57	A	14.2	25	6,200	235	12	3.61	14.17	B	
Wood	N-077	509855K	DROUILLARD	2	5,770	48.0	50	5,600	341	10	2.04	14.44	B	61.5	50	5,000	403	9	1.88	15.77	C	
Wyandot	C-070	228752H	LINCOLNWAY WEST	2	5,600	17.8	40	6,000	153	12	2.52	8.25	B	27.4	40	6,200	241	13	2.59	13.36	B	

(b) Recommend consultation between railroad and community.

(d) Indicates an increase in speed of 5 mph.

(e) Indicates track improvement to permit increase in speed of 5 mph.

Table 5-OH-14
Ohio
Elimination of Highway/Rail At-Grade Crossing Vehicle Delay and Queues Resulting From Proposed Abandonments

County	Segment Limit		Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	Trains per day	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Veh. (sec/veh)	Level of Service
	From	To										
LUCAS	Toledo	Maumee	867109M	JACKMAN RD	4	14680	1	33	24	3.91	1.06	A
LUCAS	Toledo	Maumee	867110G	TERMAINSVILLE RD	2	11940	1	27	39	4.47	1.22	A
LUCAS	Toledo	Maumee	867112V	SYLVANIA AVE	2	14200	1	32	46	4.80	1.31	A
LUCAS	Toledo	Maumee	867085B	MONROE ST.	4	16950	1	38	28	4.04	1.10	A
LUCAS	Toledo	Maumee	867086H	CENTRAL AVE	4	11280	1	26	18	3.74	1.02	A
LUCAS	Toledo	Maumee	867087P	KENWOOD BLVD	2	4990	1	11	16	3.68	1.00	A
LUCAS	Toledo	Maumee	867091E	OAKWOOD AVE	2	3190	1	7	10	3.52	0.96	A
LUCAS	Toledo	Maumee	867092L	DORR ST	4	19410	1	44	32	4.18	1.14	A
LUCAS	Toledo	Maumee	867093T	NEBRASKA AVE	2	6020	1	14	20	3.78	1.03	A
LUCAS	Toledo	Maumee	867094A	HILL AVE	4	14000	1	32	23	3.88	1.06	A
LUCAS	Toledo	Maumee	867095G	SOUTH AVE	2	2740	1	6	9	3.48	0.95	A
LUCAS	Toledo	Maumee	867096N	AIRPORT HWY.	2	14170	1	32	46	4.80	1.31	A
LUCAS	Toledo	Maumee	867097V	ARLINGTON AVE.	2	7000	1	16	23	3.88	1.06	A
LUCAS	Toledo	Maumee	851590X	GLENDALE AVE.	4	19020	1	43	31	4.16	1.13	A
LUCAS	Toledo	Maumee	867097V	BERDAN AVENUE	2	3720	1	8	12	3.57	0.97	A
LUCAS	Toledo	Maumee	851589D	SCHNEIDER RD	2	4350	1	10	14	3.62	0.99	A

Table 5-OH-15
Ohio
Elimination of Highway/Rail At-Grade Crossing Accidents
Abandonments
Rail Segment : Toledo to Maumee

County	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year	
								Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition
LUCAS	851589D	SCHNEIDER RD	Flasher	4350	2	20	0	2	0	0.0223	0.0000
LUCAS	851590X	GLENDALE AVE.	Gate	19020	4	20	0	2	0	0.0225	0.0000
LUCAS	867085B	MONROE ST.	Flasher	16950	4	20	0	2	0	0.0451	0.0000
LUCAS	867086H	CENTRAL AVE	Flasher	11280	4	20	0	2	0	0.0402	0.0000
LUCAS	867087P	KENWOOD BLVD	Flasher	4990	2	20	0	2	0	0.0247	0.0000
LUCAS	867091E	OAKWOOD AVE	Flasher	3190	2	20	0	2	0	0.0200	0.0000
LUCAS	867092L	DORR ST	Gate	19410	4	20	1	2	0	0.0676	0.0000
LUCAS	867093T	NEBRASKA AVE	Passive	6020	2	20	0	2	0	0.0566	0.0000
LUCAS	867094A	HILL AVE	Gate	14000	4	20	1	2	0	0.0644	0.0000
LUCAS	867095G	SOUTH AVE	Passive	2740	2	20	0	2	0	0.0463	0.0000
LUCAS	867096N	AIRPORT HWY.	Flasher	14170	2	20	0	2	0	0.0329	0.0000
LUCAS	867097V	ARLINGTON AVE.	Passive	7000	2	20	0	2	0	0.0586	0.0000
LUCAS	867109M	JACKMAN RD	Flasher	14680	4	20	0	2	0	0.0434	0.0000
LUCAS	867110G	TERMAINSVILLE RD	Gate	11940	2	20	0	2	0	0.0157	0.0000
LUCAS	867112V	SYLVANIA AVE	Flasher	14200	2	20	1	2	0	0.0870	0.0000
LUCAS	867113C	BERDAN AVE.	Flasher	3720	2	20	0	2	0	0.0211	0.0000

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5-PA
PENNSYLVANIA

This section provides background information for resources in Pennsylvania. Tables describe the proposed Conrail Acquisition-related activities in Pennsylvania that meet or exceed the Board's thresholds for environmental analysis. This section also presents the various analyses conducted for these activities in Pennsylvania. The analyses highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-PA.1 PENNSYLVANIA SETTING

Pennsylvania is a mid-Atlantic state. Principal products of Pennsylvania include primary metal industries, nonelectrical machinery, electrical equipment and supplies, food, fabricated metal products, chemicals, milk, cattle, eggs, corn, coal, cement, stone, and natural gas. The railroad network throughout the state provides a means of transporting and distributing many of these goods.

Transportation Facilities

Major interstates in Pennsylvania are I-80, an east/west facility; I-81, a north/south facility; I-70/76, an east/west facility; I-95, a major north/south facility for the eastern United States; I-79, a north/south facility; and I-90, an east/west facility. These interstates serve the major cities of Harrisburg, Scranton, Philadelphia, Pittsburgh, and Erie. The Port of Philadelphia and Camden PA/NJ provides port services to the state.

Railroad Facilities

Pennsylvania has 62 railroads operating a total of 5,379 route miles. Conrail, CSX, and NS are the three Class I railroads operating in Pennsylvania. Of 5,379 route miles in the state:

- Conrail operates 2,538 route miles in Pennsylvania, which is 47 percent of the state's total rail miles.

- CSX operates 699 route miles in Pennsylvania, which is 13 percent of the state's total rail miles.

- NS operates 44 route miles in Pennsylvania, which is 1 percent of the state's total rail miles.

Cities served by these railroads include Erie, Meadville, Pittsburgh, Johnstown, Altoona, Harrisburg, Williamsport, York, Lancaster, Reading, Allentown, and Philadelphia.

Conrail operates intermodal terminals in Allentown, Harrisburg, Morrisville, and Pittsburgh. Conrail also serves the Port of Philadelphia. Major freight car classification yards are located at Allentown and Pittsburgh. CSX operates an intermodal terminal in Philadelphia and freight classification yards in New Castle, Philadelphia, and Pittsburgh. CSX also serves the Port of Philadelphia. Other CSX rail related facilities are located in Glenwood, Three Rivers, Butler, Chester, Monessen, and York. NS does not operate any major rail-related facilities in Pennsylvania.

Intercity Passenger and Commuter Rail Services

Amtrak provides service on the portion of the Northeast Corridor within Pennsylvania, including the Harrisburg Branch. Major stations include Philadelphia, Paoli, Lancaster, and Harrisburg. Amtrak also operates the Pennsylvanian and Three Rivers trains, serving Lewistown, Altoona, Johnstown, and Pittsburgh utilizing Conrail's Pittsburgh Line, west of Harrisburg. Pittsburgh is also served by Amtrak's Capitol Limited, between Washington, D.C. and Pittsburgh on CSX tracks. In addition, the Amtrak Lakeshore Limited serves Erie, Pennsylvania on Conrail's Chicago Line.

Southeastern Pennsylvania Transportation Authority (SEPTA) serves 13 routes radiating from Philadelphia, on 181 station including Philadelphia International Airport, Norristown, Media, Bristol, Jenkintown, and Lansdale, Pennsylvania.

5-PA.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN PENNSYLVANIA

In the Operating Plans submitted to the Board, the Applicants indicate that the expanded CSX and NS systems would maintain competitive rail service in Pennsylvania. Its two biggest cities, Philadelphia and Pittsburgh, would retain rail freight service by two major competitors.

Philadelphia shippers would be served by six of the new CSX route combinations following the proposed Conrail Acquisition, including the Northeastern Gateway Corridor between Chicago and New York via Erie and the Atlantic Coast Corridor between Miami and Boston via Philadelphia. CSX would shift operations from its Snyder Avenue Terminal to Greenwich Yard. Track modernization is scheduled for yard facilities at Newell, Pennsylvania to enhance coal train movements.

CSX would provide two high-capacity lines between the midwest and the Atlantic seaboard. The new CSX route combinations would cut transit time by as much as one day--even more in

certain situations making rail service more competitive with truck service in Pennsylvania. CSX would build a new intermodal facility at or near Greenwich Yard. CSX would connect the existing B&O main line and the Conrail main line near the Grays Ferry Bridge and 25th Street viaduct to provide a direct route to intermodal operations in South Philadelphia.

CSX would assume all rights and responsibilities for Conrail's Philadelphia headquarters and Philadelphia-area information technology facilities. CSX and NS would share the Customer Service Center at Pittsburgh. NS would operate Conrail's Hollidaysburg Car Shop and Juniata Locomotive Shop.

NS would operate across Pennsylvania on the Conrail "Penn" Line to both Philadelphia and northern New Jersey. The railroad also would enter Pennsylvania from the southeast via Hagerstown, Maryland and Harrisburg, Pennsylvania. NS would operate into the Buffalo/Canadian gateway via the Susquehanna River Line and South Baltimore and Washington, D.C. via the Port Road line and Perryville, Maryland. The railroad would enter Philadelphia from both the west and the south. From the west, NS would operate over the Reading main line into Abrams Yard. From the south (and north) NS would enter Philadelphia on the Northeast Corridor (NEC) line of Amtrak.

NS plans to expand existing intermodal facilities in Allentown, Pittsburgh and Morrisville, Pennsylvania, and build a new Triple Crown Services (TCS) facility in Morrisville and a new conventional intermodal facility in Harrisburg (at Rutherford Yard).

The Monongahela Railway (MGA) would be owned by NS; CSX would have equal access to all current and future facilities on the line. The South Jersey/Philadelphia Shared Assets Area includes 290 route miles extending from Marcus Hook, Pennsylvania (on the Chester Industrial Track) on the south of Trenton, NJ on the north, and to River Interlocking in the Belmont area of Philadelphia on the west. The South Jersey/Philadelphia Shared Assets Area includes all Conrail Philadelphia stations and industries along key segments of the NEC.

Both CSX and NS plan to undertake extensive activities in Pennsylvania as part of the proposed Conrail Acquisition. The proposed Conrail Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis in Pennsylvania include increased train operations on a total of 19 rail line segments, increased activity at five intermodal facilities (including two newly constructed intermodal facilities and one new TCS facility), and increased number of rail cars handled at two rail yards. In Pennsylvania, there are no new rail line connections or proposed abandonments. Figures 5-PA-1a, 1b, and 1c, show the activities in Pennsylvania related to the proposed Conrail Acquisition. (All figures are provided at the end of this state discussion.)

Tables 5-PA-1, 5-PA-2 and 5-PA-3 show rail segments, intermodal facilities, and rail yards in Pennsylvania that required environmental analysis. Following these tables are brief descriptions of the activities, where appropriate. The figures also show additional segments SEA studied.

Table 5-PA-1
Pennsylvania Rail Line Segments Which
Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles[a]	County	Setting
C-033	Cumberland	Sinns, PA	CSX Cumberland to Pittsburgh	14	Allegheny	Rural
				10	Bedford	Rural
				38	Fayette	Rural
				48	Somerset	Rural
				17	Westmoreland	Rural
C-080	Field, PA	Belmont, PA	Conrail Philadelphia Metro	4	Philadelphia	Urban
C-081	New Castle, PA	Youngstown, OH	CSX Pittsburgh Subdivision	10	Lawrence	Rural/ Agriculture
C-082	Rankin Jct., PA	New Castle, PA	CSX Pittsburgh Subdivision	23	Allegheny	Urban/ Suburban
				22	Beaver	Urban/ Suburban
				10	Lawrence	Urban/ Suburban
C-083	Philadelphia (RG), PA	Field, PA	Conrail Philadelphia Metro	2	Philadelphia	Urban
C-084	Philadelphia (RG), PA	Wilsmere, DE	CSX Philadelphia Subdivision	11	Delaware	Urban
				4	Philadelphia	Urban
C-085	Sinns, PA	Brownsville, PA	CSX Pittsburgh to Brownsville	19	Allegheny	Rural with Sporadic Development/ Industry

Table 5-PA-1
Pennsylvania Rail Line Segments Which
Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles[a]	County	Setting
C-085	Sinns, PA	Brownsville, PA	CSX Pittsburgh to Brownsville	11	Fayette	Rural with Sporadic Development/ Industry
				8	Westmoreland	Rural with Sporadic Development/ Industry
C-086	Sinns, PA	Rankin Jct, PA	CSX Pittsburgh Metro	9	Allegheny	Suburban/ Industry
N-070	Ashtabula, OH	Buffalo, NY	NS Buffalo to Cleveland	44	Erie	Rural/ Recreational
N-090	Harrisburg, PA	Rutherford, PA	Conrail Harrisburg Metro	6	Dauphin	Urban/ Suburban
N-091	Harrisburg, PA	Riverton Jct., VA	Conrail/NS Harrisburg to Fort Royal	38	Cumberland	Urban/ Suburban
				1	Dauphin	Urban/ Suburban
				26	Franklin	Rural
				2	York	Rural
N-092	Harrisburg, PA	Marysville, PA	Conrail Harrisburg Metro	7	Dauphin	Urban/ Suburban
				2	Perry	Urban/ Suburban
N-093	Harrisburg, PA	Shocks, PA	Conrail Harrisburg Line	13	Dauphin	Urban/ Suburban
				9	Lancaster	Urban/ Suburban

Table 5-PA-1
Pennsylvania Rail Line Segments Which
Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles[a]	County	Setting
N-094	WM Jct., PA (Reading)	Rutherford, PA (Harrisburg)	Conrail Harrisburg to Reading & Allentown	10	Berks	Urban/Rural
				10	Dauphin	Urban/Rural
				25	Lebanon	Rural
N-095	Rochester, PA	Youngstown, OH	Conrail Rochester to Youngstown and Newcastle	12	Beaver	Urban/Rural
				18	Lawrence	Urban
S-031	Midway, NJ	Morrisville, PA	Amtrak Northeast Corridor	1	Bucks	Urban/ Suburban
S-040	Arsenal, PA (Philadelphia)	Davis, DE (Newark)	Amtrak Northeast Corridor	15	Delaware	Urban/ Suburban
S-041	Morrisville, PA	Zoo, PA (Philadelphia)	Amtrak Northeast Corridor	11	Bucks	Urban/ Suburban
				13	Philadelphia	Urban
				5	Delaware	Urban
S-042	South Philadelphia, PA	Field, PA (Philadelphia)	CSX Philadelphia Metro	5	Philadelphia	Urban

[a] Mileage derived from Geographic Information System and U.S. Census data.

C = CSX

N = NS

S = Shared with Amtrak's Northeast Corridor (not Shared Asset Areas as described in the Application).

Intermodal Facilities

The Applicants propose closing two intermodal facilities, constructing three new ones, and increasing activity at three others. Brief descriptions follow, with more details presented in Section 5-PA.10.

Greenwich Intermodal Facility (Philadelphia County, PA) (CSX). The existing CSX intermodal facility located at Snyder Avenue in South Philadelphia would be closed after the proposed Conrail Acquisition. This intermodal facility would be relocated to a new facility that would be constructed at Greenwich Yard, a Conrail facility that CSX would operate after the proposed Conrail Acquisition. Greenwich Yard is located adjacent to the former Philadelphia Naval Base just south of Interstate 95. (See Figure 5-PA-2, provided at the end of the state discussion.) This new intermodal facility is still in the planning stages, but CSX anticipates the main gate for truck entry and exit movements would be located on Christopher Columbus Boulevard (formerly known as South Delaware Avenue). Two interstate highways serve the proposed facility: I-76 and I-95. The primary route for trucks to and from I-76 and I-95 would be along South Front Street and Oregon Avenue to Christopher Columbus Boulevard. CSX expects the facility to handle 272 trucks per day after the proposed Conrail Acquisition. This corresponds to 544 new truck trips per day.

Allentown Intermodal Facility (Lehigh County, PA) (NS). NS would operate the existing Conrail Allentown intermodal facility after the proposed Conrail Acquisition. The facility is located on the south side of the Lehigh River between Allentown and Bethlehem. (See Figure 5-PA-3, provided at the end of the state discussion.) The main gate for truck entry and exit movements is located on Riverside Drive. Two major highways serve the facility: I-78 and U.S. Route 22. The primary route for trucks to and from I-78 includes State Route 412 and Third Street to Riverside Drive. The primary route for trucks to and from U.S. Route 22 includes State Route 378 and West Third Street to Riverside Drive.

The facility currently handles approximately 39 trucks per day. With the proposed Conrail Acquisition, this figure would increase to 138 trucks per day. This increase of 99 trucks per day corresponds to 198 additional truck trips per day.

Rutherford Intermodal Facility (Dauphin County, PA) (NS). NS would close the existing conventional Conrail intermodal facility located in Harrisburg after the proposed Conrail Acquisition. NS would relocate this conventional intermodal facility adjacent to the site of the existing Conrail Triple Crown Services (TCS) facility located east of Harrisburg near the town of Rutherford Heights. (See Figure 5-PA-4, provided at the end of the state discussion.) NS would operate the combined facilities. The main gate for truck entry and exit movements to the existing TCS facility is located on Grayson Road east of Mushroom Hill Road. The proposed conventional intermodal facility is still in the planning stages, but NS anticipates the main gate for truck entry and exit movements to the new facility to be located on Grayson Road. The route for trucks to and from Interstates 83 and 283 includes U.S. Route 322, Rupp Hill Road and Grayson Road.

The Conrail TCS facility currently handles approximately 68 trucks per day. The proposed Conrail Acquisition would increase this figure to a total of 398 trucks per day for the combined facility. This increase of 330 trucks per day corresponds to 660 additional truck trips per day.

Morrisville Intermodal Facility (Bucks County, PA) (NS). NS would operate the existing Conrail intermodal facility located just west of Morrisville and south of the U.S. Route 1 Bypass after the proposed Conrail Acquisition. (See Figure 5-PA-5, provided at the end of the state discussion.) The main gate for truck entry and exit movements is located on Cabot Boulevard. NS would expand the existing facility and would also construct a new TCS facility on existing Conrail property in close proximity to the existing facility. This new TCS facility is still in the planning stages, but NS anticipates the main gate for the proposed facility to be located near the existing gate on Cabot Boulevard. The primary route for trucks to and from Interstate 95 includes the U.S. Route 1 Bypass and Oxford Valley Road to Cabot Boulevard. Cabot Boulevard ends at the gate to the existing facility.

The Conrail facility currently handles approximately 164 trucks per day. The proposed Conrail Acquisition would increase this figure to 296 trucks per day for conventional intermodal traffic plus 51 new trucks per day for TCS intermodal traffic. This total increase of 183 trucks per day combined for both facilities corresponds to 366 additional truck trips per day.

Pitcairn Intermodal Facility (Allegheny County, PA) (NS). NS would operate the existing Conrail intermodal facility located near the town of Pitcairn east of Pittsburgh after the proposed Conrail Acquisition. (See Figure 5-PA-6, provided at the end of the state discussion.) The main gate for truck entry and exit movements is located on Wall Street east of State Route 48. The primary route for trucks to and from Interstate 376 is along State Route 48 and Wall Street.

Conrail opened this facility in 1996. NS expects this facility to handle 114 trucks per day after the proposed Conrail Acquisition. This corresponds to 228 truck trips per day.

Table 5-PA-2
Pennsylvania Intermodal Facilities Which
Meet or Exceed Board Environmental Thresholds

Site ID	Location	County	Facility	Description	Setting
CM-05	Philadelphia, PA	Philadelphia, PA	Greenwich	Increase of 272 trucks per day	Urban/Industrial
NM-14	Allentown, PA	Lehigh, PA	Allentown	Increase of 99 trucks per day	Urban/Industrial
NM-15	Harrisburg, PA	Dauphin, PA	Rutherford	Increase of 330 trucks per day	Urban/Industrial
NM-16	Morrisville, PA	Bucks, PA	Morrisville	Increase of 183 trucks per day	Industrial
NM-17	Pittsburgh, PA	Allegheny, PA	Pitcairn	Increase of 114 trucks per day	Town/Industrial

Rail Yards

The Applicants propose increases in activities at two rail yards.

Greenwich Rail Yard (Philadelphia County, PA) (CSX). The Greenwich Yard is located near the naval base in Philadelphia.

Harrisburg Rail Yard (Dauphin County, PA) (NS). The Harrisburg Yard is located in Harrisburg, Dauphin County, Pennsylvania on Park Drive, between Mallay Street and I-81.

Table 5-PA-3
Pennsylvania Rail Yards Which Meet Or Exceed Board Environmental Thresholds

Site ID	Location	County	Facility	Description	Setting
NY-09	Harrisburg, PA	Dauphin	Harrisburg	Increase of 129 rail cars/day	Urban/ Industrial
CY-06	Philadelphia, PA	Philadelphia	Greenwich	Increase of 196 rail cars/day	Industrial

5-PA.3 PENNSYLVANIA SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-related activities in Pennsylvania that meet the Board's thresholds for environmental analysis and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Energy.
- Cultural Resources.
- Hazardous Materials and Waste Sites.
- Natural Resources.
- Land Use/Socioeconomics.

Details of the environmental analysis for Pennsylvania follow.

5-PA.4 PENNSYLVANIA SAFETY: FREIGHT RAIL OPERATIONS

SEA conducted a statistical analysis to evaluate the potential change in safety on all rail line segments where the proposed Conrail Acquisition would result in eight or more additional

freight trains per day. SEA identified nine rail line segments within Pennsylvania that would experience this level of increased activity. While increased freight train activity would increase the probability of a freight train accident, SEA did not consider an increase significant unless the predicted accident rate shortened the duration between accidents to one every 100 years or less per mile. Table 5-PA-4 presents results of the analysis, showing the approximate mileage of each rail line segment within the state.

Table 5-PA-4
Estimated Change in Years Between Accidents - Freight Rail Operations

Site ID	Between	And	Miles in State	Increase in Trains Per Day	Pre-Acquisition Accident Interval[a]	Post-Acquisition Accident Interval[a]
C-082	Rankin Jct.	New Castle, DE	55	9.4	157	116
C-083	RG (Philadelphia)	Field	2	16.0	0[b]	288
C-085	Sinns	Brownsville	38	9.3	1,301	176
C-086	Sinns	Rankin Jct.	9	9.4	172	130
N-070	Ashtabula, OH	Buffalo, NY	44	12.1	349	175
N-090	Harrisburg	Rutherford	6	13.6	113	88
N-091	Harrisburg	Riverton Jct., VA	67	8.5	417	231
S-040	Arsenal	Davis, DE	15	8.2	2,377	520
S-042	South Philadelphia.	Field	5	12.9	472	187

[a] Accident Interval figures show the years/mile.
[b] No current through traffic.

The Federal Railroad Administration (FRA) requires all railroads to submit reports for all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). Train accidents meeting this reporting requirement are relatively infrequent. The FRA reported about 2,600 accidents (3.69 accidents per million train miles[1]) nationally in 1996. Most of these accidents were relatively minor; almost 90 percent of these accidents caused less than $100,000 in damage. In addition, most of the train accidents did not

[1] "Train miles" are calculated by multiplying the number of trains by the distance traveled. For example, on a typical 100 mile rail line, one million annual train miles results from operating 28 trains per day every day for 365 days.

affect people or non-railroad property.

Accident risk predictions are best expressed by describing the elapsed time expected between any two consecutive events. The current national average is that a main line freight train accident occurs once every 117 years on each mile of route. FRA records, as described in Chapter 4, "System-Wide and Regional Setting Impacts," show a substantial decrease, both in total number of accidents and in accidents per million train miles, a standard industry measure. Because there are few accidents, and most of these accidents are relatively minor, it is not possible for SEA to accurately predict either the frequency or severity of actual accidents.

SEA estimated the change in the risk of an accident resulting from the increased activity on rail line segments as a result of the proposed Conrail Acquisition. Because SEA analyzed rail line segments that vary in length from one mile to more than 100 miles, and because freight train accidents typically have little impact on surrounding areas, SEA expressed all predicted risks of accidents on a route-mile basis. Section 3.2 "Safety: Freight Rail Operations," discusses the analysis process in greater detail.

5-PA.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The rail line segment between Harrisburg and Rutherford (N-090) meets SEA's criteria of significance: an accident is anticipated every 88 years. Although this rail line segment is a double track main line with a modern train control signal system and wayside defect detectors, SEA considered site specific mitigation measures to reduce the risk of freight train accidents for this rail line segment.

One mitigation measure to reduce risk would be to increase the frequency of inspections of the rail line segment for internal rail flaws. This would be accomplished by basing the inspection intervals on train density as measured by million-gross-ton-miles rather than on an annual inspection. This approach is consistent with the proposed FRA rule (49 CFR, Part 213.237 - Docket No. RST-90-1). In addition, the Applicants would provide annual training for track inspectors who are responsible for the particular rail line segment.

A second recommended mitigation measure would be to ensure that all rail equipment traveling the rail line segment is inspected by knowledgeable mechanical inspectors. This would be accomplished by providing annual training for the mechanical inspectors at the originating yards and initial terminal for trains traversing the rail line segment.

5-PA.5 PENNSYLVANIA SAFETY: PASSENGER RAIL OPERATIONS

In Pennsylvania, passenger trains share certain tracks with freight trains. SEA evaluated the potential for increased accidents between freight trains and passenger trains, for both intercity and commuter trains. Because changes in the frequency of rail accidents are directly related to changes in overall train activity, SEA's analysis concentrated on rail line segments carrying both

passenger and freight trains that would experience an increase in freight train traffic of one or more trains per day.

In Chapter 4, "System-Wide and Regional Setting, Impacts and Proposed Mitigation," SEA addresses the issue of potential increased risk to passenger train operations associated with the proposed Conrail Acquisition. System-wide, SEA identified 197 freight rail line segments that also carry passenger trains. Of these, SEA analyzed 93 rail line segments that would experience an increase of one or more freight trains per day resulting from the proposed Acquisition. Nine of these rail line segments are located in Pennsylvania; these rail line segments are part of Amtrak passenger train routes.

The Federal Railroad Administration (FRA) requires reports from railroads concerning all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). FRA requires the same reporting for passenger train accidents. A nationwide average of fewer than 200 passenger train accidents per year (for both Amtrak intercity and urban area commuter trains) has occurred over the last three years. Most of these accidents were relatively minor and rarely involved any fatalities, but because the safety of passengers as well as property is frequently involved, their occurrence is of serious concern.

Given the limited number of passenger rail accidents, SEA was unable to accurately predict the severity, location, or timing of actual accidents. SEA therefore focused on estimating the potential risks of an accident. In this safety analysis, SEA used increased freight activity on rail line segments to estimate the changes in passenger train accident risks. To assess significance, SEA first determined whether the proposed Acquisition-related change in the projected accident rate was greater than an annual increase of 25 percent. SEA then determined if the predicted accident frequency was less than one accident in 150 years. Thus, SEA determined a potential impact to be significant if the projected annual increase in accidents was greater than 25 percent and the frequency was less than one accident in 150 years.

5-PA.5.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The pre-Acquisition accident interval for each rail line segment is shown in Table 5-PA-5. Accidents pose potential threats to passengers on the train; therefore, for each rail line segment, risk is expressed as the expected interval between events over the length of the rail line segment. Table 5-PA-5 shows the expected change in years between accidents for the individual rail line segments.

Table 5-PA-5
Estimated Change in Years Between Accidents for Passenger Rail Operations

Site ID	From	To	Miles in State	Pre-Acquisition Accident Interval[a]	Post-Acquisition Accident Interval [a]
S-040	Arsenal	Davis, DE	15	712	156
N-092	Harrisburg	Marysville	9	2,287	1,975
S-041	Morrisville	Zoo	29	809	387
C-081	New Castle	Youngstown	10	3,331	2,742
C-033	Cumberland, MD	Sinns	127	545	460
C-086	Sinns	Rankin Jct	9	7,168	5,492
N-227	Frankfort Jct.	Pavonia	4	2,227	1,836
N-263	Pitcarin	Jacks Run	18	1,478	1,325
S-031	Midway, NJ	Morrisville	1	1,015	314

[a] Accident Intervals shows years between accidents.

Based on information provided by the railroads and SEA's independent analysis, SEA determined that the increased risk for passenger train accidents for these nine rail line segment did not exceed SEA's criteria for significance. As a result, SEA does not propose mitigation.

5-PA.6 PENNSYLVANIA SAFETY: HIGHWAY/RAIL AT-GRADE CROSSINGS

Increased train activity could affect the safety of roadway users at highway/rail at-grade crossings. To address potential changes in accident frequency, SEA compared existing accident frequency rates with accident frequency rates at all highway/rail at-grade crossings that would experience a Conrail Acquisition-related increase of eight or more trains per day. At these locations, SEA looked at the most recent five years of accident history available, and calculated the potential change in the number of years between accidents. SEA's analysis procedure considered the type of existing warning devices at the highway/rail at-grade crossings, including passive devices (signs or crossbucks), flashing lights, or gates.

To evaluate the significance of potential changes in accident frequency in Pennsylvania, SEA categorized highway/rail at-grade crossings into two categories:

- Category A consisted of highway/rail at-grade crossings with a history of relatively frequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Pennsylvania with accident frequency rates at or above the state's 50th highest accident frequency rate of

one accident every eight years (0.1239 accident frequency rate) to be Category A highway/rail at-grade crossings. For all Category A highway/rail at-grade crossings, SEA considered the relatively small accident frequency rate increase of one accident every 100 years (a 0.01 accident frequency rate increase) to be significant.

- Category B consisted of highway/rail at-grade crossings with a history of relatively infrequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Pennsylvania with accident frequency rates less than one accident eight years (less than 0.1239 accident frequency rate) to be Category B highway/rail at-grade crossings. For these crossings, SEA considered an accident frequency rate increase of one accident every 20 years (a 0.05 accident frequency rate increase) to be significant.

Table 5-PA-6, provided at the end of this state discussion, presents the results of SEA's analysis. A county by county summary of results follows.

5-PA.6.1 County Analysis

Allegheny County

SEA's safety analysis showed that for the 31 highway/rail at-grade crossings studied in Allegheny County, the predicted increases in accident frequency would range from 0.0019 to 0.0381. This translates into a range of increases from one accident every 526 years to one accident every 26 years. SEA found these predicted increases to be below the criteria for significance.

Beaver County

SEA's safety analysis showed that for the two highway/rail at-grade crossings studied in Beaver County, the predicted increases in accident frequency would range from 0.0026 to 0.0071. This translates into a range of increases from one accident every 385 years to one accident every 141 years. SEA found these predicted increases to be below the criteria for significance.

Cumberland County

SEA's safety analysis showed that for the 32 highway/rail at-grade crossings studied in Cumberland County, the predicted increases in accident frequency would range from 0.0019 to 0.0229. This translates into a range of increases from one accident every 526 years to one accident every 44 years. SEA determined that the predicted increase resulting from the proposed Conrail Acquisition were significant at York Road (SR74), Criswall, and Mill. These highway/rail at-grade crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Erie County

SEA's safety analysis showed that for the 49 highway/rail at-grade crossings studied in Erie County, the predicted increases in accident frequency would range from 0.0031 to 0.0398. This translates into a range of increases from one accident every 323 years to one accident every 25 years. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at Peach Street, Cherry Street, Raspberry Street, and Lucas Road. These highway/rail at-grade crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance. The Applicants have developed an agreement for NS to place new tracks and reroute its operations to the CSX corridor through Erie. This rerouting would eliminate the Peach Street, Cherry Street, and Raspberry Street highway/rail at-grade crossings identified in SEA's analysis as having significant predicted increases in accident frequency.

Fayette County

SEA's safety analysis showed that for the two highway/rail at-grade crossings studied in Fayette County, the predicted increases in accident frequency would range from 0.0139 to 0.0283. This translates into a range of increases from one accident every 72 years to one accident every 35 years. SEA found these predicted increases to be below the criteria for significance.

Franklin County

SEA's safety analysis showed that for the 14 highway/rail at-grade crossings studied in Franklin County, the predicted increases in accident frequency would range from 0.0059 to 0.0455. This translates into a range of increases from one accident every 169 years to one accident every 22 years. SEA determined that the predicted increases were significant at Guilford Springs Road and at Hayes Road. These highway/rail at-grade crossings are classified as Category A. SEA found the predicted increases at other locations to be below the criteria for significance.

Lawrence County

SEA's safety analysis showed that for the five highway/rail at-grade crossings studied in Lawrence County, the predicted increases in accident frequency would range from 0.0030 to 0.0084. This translates into a range of increases from one accident every 333 years to one accident every 119 years. SEA found these predicted increases to be below the criteria for significance.

5-PA.6.2 Summary of Potential Effects and Preliminary Recommended Mitigation

SEA determined that the proposed Conrail Acquisition would significantly increase the predicted accident risk at nine highway/rail at-grade crossings in Pennsylvania. Table 5-PA-7 shows SEA's recommended mitigation to reduce these risks.

SEA analyzed the accident frequencies with and without these upgraded warning devices in place, as shown in Table 5-PA-6. With the mitigation measures, the accident frequencies at these locations would decrease to well below the pre-Acquisition levels. Therefore, SEA recommends that NS upgrade the existing warning devices as shown in Table 5-PA-7. For the two locations that currently have gates, SEA recommends that NS upgrade the existing warning devices to four quadrant gates or install median barriers to prevent drivers from going around gates. These recommendations would eliminate the adverse effects on highway/rail at-grade crossing safety resulting from the proposed Conrail Acquisition in Pennsylvania.

Table 5-PA-7
Recommended Mitigation to Improve Safety at Highway/Rail At-Grade Crossings in Pennsylvania

County	Railroad Segment	FRA ID	Highway/Rail At-Grade Crossing	Existing Warning Devices	SEA's Proposed Mitigation
Cumberland	N-091	592290T	York Road/SR74	Gates	4-Quad Gates or Median Barriers
Cumberland	N-091	592295C	Criswall	Passive	Flashing Lights
Cumberland	N-091	592320H	Mill	Passive	Flashing Lights
Erie	N-070	471901W	Peach Street	Gates	4-Quad Gates or Median Barriers[a]
Erie	N-070	471906F	Cherry Street	Flashing Lights	Gates[a]
Erie	N-070	471911C	Raspberry Street	Flashing Lights	Gates[a]
Erie	N-070	471940M	Lucas Road	Passive	Flashing Lights
Franklin	N-091	535146X	Guilford Springs Rd	Passive	Flashing Lights
Franklin	N-091	535163N	Hayes Road	Passive	Flashing Lights

[a] Also mitigated by rerouting operations to CSX corridor.

5-PA.7 PENNSYLVANIA SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary concern with the rail transportation of hazardous materials is a spill or accidental release resulting from a train accident. SEA analyzed all rail line segments where the number of car loads containing hazardous materials would increase as a result of the proposed Acquisition. This resulted in SEA evaluating rail line segments that were below the Board's thresholds for environmental analysis.

The Association of American Railroads (AAR), in conjunction with the Chemical Manufacturer's Association (CMA), developed standards and practices to manage the risk of a

hazardous material spill that the railroads have adopted. The practices include identifying "key routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

5-PA.7.1 Rail Line Segment Analysis

As a result of the proposed Conrail Acquisition, the railroads would change the routing of many car loads of hazardous material. The designation of key routes would change as the railroads shift hazardous material traffic from one rail line to another. In addition, certain rail line segments that are currently key routes would carry increased volumes of cars containing hazardous material.

SEA applied two different criteria to determine if the effects of rerouting hazardous material car loads are potentially significant:

1. The volume of hazardous materials transported on a rail line would be 10,000 or more car loads per year. The Acquisition-related change in volume of hazardous material car loads would upgrade a rail line segment to a key route designation.

2. The volume of hazardous material car loads doubles, and exceeds 20,000 or more car loads per year. SEA has termed rail line segments which meet these criteria a "major key route."

Rail line segments that would meet the first criteria are considered "key routes" and warrant the base level mitigation. Rail line segments that meet the second criteria are considered "major key routes" and warrant expanded mitigation. Depending on the individual circumstances, a rail line segment could meet both criteria and therefore warrant both the base level and the expanded mitigation.

5-PA.7.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Potential Effects. Based on the information provided by the Applicants and SEA's independent analysis, SEA determined that nine rail line segments in Pennsylvania carrying increased amounts of hazardous material are of potential concern. Table 5-PA-8 shows these rail line segments, indicates the estimated annual car loads of hazardous material for both pre- and post-Acquisition, and identifies the key route status of each. SEA determined that all nine rail line segments currently carry less than 10,000 car loads of hazardous material per year but would increase to at least 10,000 car loads per year due to the proposed Acquisition. Two routes would

at least double the volume of hazardous material transported, resulting in 20,000 or more car loads per year. Two routes meet both of these significance thresholds.

Preliminary Mitigation Recommendation. SEA recommends requiring the Applicants to bring the rail line segments into compliance with AAR key route standards and practices for the nine rail line segments that would become a new key route.

For the two segments in Table 5-PA-8 identified as major key routes, where the volume of hazardous material car loads would at least double and exceed 20,000 car loads, SEA recommends that CSX and NS develop a Hazardous Materials Emergency Response Plan to contain and minimize the potential effects of any accidents or incidents. SEA will further recommend that CSX and NS conduct hazardous materials accident simulations with the voluntary participation of emergency service providers along the rail line segments at least once every two years. Participants in these plans include county and municipal government, local fire departments, and medical and other emergency response teams.

Table 5-PA-8
Rail Line Segments with Significant Increases in Annual Hazardous Material Car Loads

Site ID	Between	And	Miles in State	Estimated Annual Car Loads		Significance Thresholds	
				Pre-Acquisition	Post-Acquisition	New Key Route	Major Key Route
C-081	Newcastle, PA	Youngstown, PA	10	8,000	12,000	X	
C-766	West Falls, PA	CP Newtown Jct., PA	4	5,000	20,000	X	X
N-070	Buffalo, NY	Ashtabula, OH	44	8,000	26,000	X	X
N-095	Rochester, PA	Youngstown, OH	30	2,000	11,000	X	
N-203	Bethlehem, PA	Allentown, PA	3	8,000	11,000	X	
N-216	Reading, PA	Reading Belt Jct., PA	2	4,000	10,000	X	
N-245	Port Jervis, NY	Binghamton, NY	42	0	18,000	X	
S-232	Park Jct., PA	Frankford Jct., PA	6	8,000	11,000	X	
S-233	Frankford Jct., PA	Camden, NJ	3	8,000	11,000	X	

5-PA.8 PENNSYLVANIA TRANSPORTATION: PASSENGER RAIL SERVICE

In Pennsylvania, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-relatedeffects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Amtrak currently provides service to the Philadelphia, Harrisburg, Pittsburgh, and Erie areas on its own lines and on Conrail and CSX lines. Section 4.7.1, "Intercity Passenger Rail Service," discusses intercity passenger rail service effects.

Commuter Rail

SEA's evaluation included an assessment of the projected level of train traffic and the capacity of the railroad facilities including the number of main tracks, maximum authorized speed for freight and passenger trains, and the type of train control, signaling and train dispatching system utilized. SEA also examined the frequency of interlockings, which permit faster trains to move around slower trains. SEA utilized experienced railroad operating personnel to assess each line segment using timetables, track charts, existing and proposed train levels, professional experience and personal familiarity with the rail facilities.

Southeastern Pennsylvania Transportation Authority (SEPTA) operates most of the transit service in the five-county metropolitan Philadelphia area. SEPTA operates commuter rail service on 13 lines. The Applicants propose a reduction of 0.6 and 4.3 freight trains per day for the two Conrail-owned segments on which SEPTA operates from Philadelphia to Fox Chase and to West Trenton, New Jersey. CSX, which will acquire these two rail line segments will operate in accordance with the Northeast Operating Rules Advisory Committee (NORAC) operating rules, which SEPTA, Amtrak, and Conrail uniformly follow on these segments. The Northeast Corridor along this segment has four to five main tracks. Some are freight-only tracks such as the 2.2-mile bypass of Amtrak's Philadelphia-30th Street Station and the five-mile Delair Branch sharing the Northeast Corridor alignment. The Amtrak segment between Frankford Junction and the Delair Bridge to New Jersey does not have freight only tracks. Therefore, SEA determined that there is substantial capacity available on the Northeast Corridor for the movement of freight trains during the late-night through early morning hours. Amtrak controls dispatching of freight trains on the Northeast Corridor. Amtrak is able to control the planning and execution of its nighttime maintenance of way programs. New Jersey Transit (NJT) uses the Northeast Corridor for Philadelphia to Atlantic City, New Jersey service via the Northeast Corridor to Frankford Junction (7.5 miles) and the Delair Bridge, over which NJT has a dedicated passenger train track.

SEPTA owns and operates approximately 99 route miles. SEPTA uses 69 miles of trackage rights on Amtrak's Northeast Corridor between Trenton, New Jersey, and Newark, Delaware, and 33.1 miles on Amtrak's Harrisburg route to Downingtown, Pennsylvania.

SEPTA's operating agreement with Conrail (1990) does not have a specific expiration date, but remains in effect until either party gives a six-month notice of termination. A noteworthy provision of that agreement is that SEPTA dispatches two segments of Conrail's Trenton Line on which SEPTA operates the Fox Chase and West Trenton services. The agreement, however, provides that Conrail may assume such dispatching control on sixty days notice. SEPTA's 1987 operating agreement with Amtrak expires in 2016.

Conrail operates a number of trains on the Amtrak-owned Northeast Corridor between Morrisville, Pennsylvania, just west of Trenton, New Jersey, and the Delaware state line. The Applicants propose increases in freight traffic ranging from 3.7 to 8.2 trains per day on the Northeast Corridor. These trains will operate in the late night hours when there is no commuter

service. Chapter 4, Section 4.7.1, "Intercity Passenger Rail Service," provides a discussion of intercity passenger rail service effects.

Future Services Under Study

In addition to the existing commuter rail operations in Pennsylvania, SEPTA, Montgomery County, and Berks County are studying the feasibility of light rail service on an abandoned former Pennsylvania Railroad alignment between Philadelphia and Norristown, as well as to Morrisville and Reading. The routes from Norristown to Morrisville and Norristown to Reading would be along, but not necessarily utilizing Conrail trackage, and would be on Conrail's Morrisville and Conrail's Harrisburg lines, respectively. There is presently no capital funding of the proposal, nor operating agreements for the service if the light rail line were to be constructed.

Summary of Potential Effects and Preliminary Recommended Mitigation

Based on the evaluation of railroad capacity issues and information provided by the Applicants including operating plans and existing and projected train traffic, SEA concluded that the existing capacity of the commuter rail line segments evaluated could accommodate the proposed increase in freight train levels without adverse effects on SEPTA commuter train service in Pennsylvania. Therefore, mitigation is not required.

5-PA.9 PENNSYLVANIA TRANSPORTATION: ROADWAY CROSSING DELAY

In order to analyze the effects of the proposed Conrail Acquisition on the roadway system at existing highway/rail at-grade crossings, SEA identified the crossings on rail line segments that would exceed the Board's environmental analysis thresholds for air quality. SEA then calculated potential changes in vehicle delay at these crossings where average daily traffic (ADT) volumes are 5,000 or greater. SEA concluded that the potential effect of increased train traffic for highways with ADT volumes below 5,000 would be experienced by very few drivers and the additional vehicular delay would be minimal. The description of levels of service and criteria of significance have been addressed in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," and Appendix C, "Traffic and Transportation."

For crossings that would experience significant effects from the proposed Acquisition on vehicular delay, SEA tested mitigation strategies which involved increasing train speeds by increments of five miles per hour. SEA examined train operation guidelines and made preliminary recommendations to increase specific train speeds where it was easy to implement. At other locations, SEA recommended that the Applicants consult with the local community and with the local highway/transportation departments and the Pennsylvania Department of Transportation to agree on mitigating measures.

5-PA.9.1 County Analysis

There are nine counties in Pennsylvania that have highway/rail at-grade crossings for which SEA performed vehicle delay calculations. Table 5-PA-9, provided at the end of this state discussion, contains a summary of these results.

Beaver County

The single crossing in Beaver County would have a minimal increase in crossing delay per stopped vehicle. The level of service under post-Acquisition conditions would be C. Under post-Acquisition conditions, the maximum queue would increase by one vehicle.

Berks County

The single crossing analyzed in Berks County would have a decrease in crossing delay per stopped vehicle. The level of service under post-Acquisition conditions would be C. Under the post-Acquisition conditions the maximum queue would decrease by one vehicle.

Cumberland County

The three crossings analyzed in Cumberland County would either have a decrease or a minimal increase in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be B. Under the post-Acquisition conditions, the queues would decrease by up to two vehicles.

Dauphin County

The single crossing analyzed in Dauphin County would have a decrease in crossing delay per stopped vehicle. The level of service under post-Acquisition conditions would be C. Under the post-Acquisition conditions the maximum queue would decrease by one vehicle.

Delaware County

The nine crossings analyzed in Delaware County would have a minimal increase in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be B and C. The largest increase in maximum queue would be one vehicle.

Erie County

The nine crossings analyzed in Erie County would have a minimal increase in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be in the range of B to E. The largest increase in maximum queue would be one vehicle. Five crossings (Peach Street, Sassafras Street, Cherry Street, Liberty Street, and Raspberry Street) would experience

post-Acquisition levels of service E. NS has proposed a mitigation plan, as discussed in Section 5-PA.16, "Pennsylvania Areas of Concern" which would eliminate these grade crossings.

Lawrence County

The single crossing analyzed in Lawrence County would have a decrease in crossing delay per stopped vehicle. The level of service under post-Acquisition conditions would be C. The maximum queue would decrease by one vehicle.

Lebanon County

The three crossings analyzed in Lebanon County would have a decrease in crossing delay per stopped vehicle. Under the post-Acquisition conditions the maximum queue would decrease by up to two vehicles. Two crossings (Front Street - Lincoln and Seventh Street) would experience post-Acquisition levels of service D. At both of these locations, the pre-Acquisition condition is level of service D with post-Acquisition average delay per vehicle showing a reduction as a result of the proposed Acquisition.

Westmoreland County

The single crossing, at Main Street, analyzed in Westmoreland County would have a minimal increase in crossing delay per stopped vehicle. The level of service would reduce from a pre-Acquisition level of service C to post-Acquisition level of service D. The increase in maximum queue would be one vehicle. SEA recommends that the Applicants consult with the local community and with the local highway/transportation departments and the Pennsylvania Department of Transportation to agree on mitigating measures at the crossing.

5-PA.9.2 Summary of Potential Effects and Preliminary Recommended Mitigation

The proposed Conrail Acquisition would have no significant effect on vehicle delay for highway/rail at-grade crossings in Pennsylvania except at six crossings in Erie and Westmoreland Counties. SEA recognizes that five of the six crossings would be eliminated by the NS proposed Erie mitigation plan.

NS proposed mitigation plan for Erie is presented in Appendix S. SEA invites comments on the proposed mitigation plan and encourages the Applicants to reach an agreement relative to implementation of the plan. If negotiations are not completed prior to the publication of the Final EIS, SEA may recommend that the Board address these issues, including the funding of any improvements, in its final decision.

Regarding the remaining Westmoreland County crossing, it is SEA's preliminary recommendation that the Applicants consult with the community and with the local

highway/transportation departments and the Pennsylvania Department of Transportation to agree on mitigation measures.

5-PA.10 PENNSYLVANIA TRANSPORTATION: ROADWAY EFFECTS FROM RAIL FACILITY MODIFICATIONS

5-PA.10.1 Intermodal Facilities

Five intermodal facilities in Pennsylvania would experience increases in truck activity as a result of the proposed Acquisition. Others would experience decreases in truck activity. The following is a summary of CSX and NS intermodal operations in Pennsylvania.

5-PA.10.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Intermodal Facility: Allentown - Allentown (Lehigh County) (NS)

NS would operate the existing Conrail Allentown intermodal facility after the proposed Acquisition. The facility is located on the south side of the Lehigh River between Allentown and Bethlehem. The main gate for truck entry and exit movements is located on Riverside Drive. Two major highways serve the facility: Interstate 78 and U.S. Route 22. The primary truck route to and from Interstate 78 includes State Route 412 and Third Street to Riverside Drive. The primary truck route to and from U.S. Route 22 includes State Route 378 and West Third Street to Riverside Drive.

The facility currently handles approximately 39 trucks per day. With the proposed Acquisition, this figure would increase to 138 trucks per day. This increase of 99 trucks per day corresponds to 198 additional truck trips per day. SEA assumed that half of the additional truck trips would use Interstate 78, State Route 412 and Third Street. The other half of the additional truck trips would use U.S. Route 22, State Route 378 and West Third Street. All additional truck trips would use Third Street and Riverside Drive. Table 5-PA-10 summarizes the analysis of traffic volumes to determine the effects of these additional truck trips on the roadways approaching the facility.

The analysis results show that the total daily increase in truck traffic with the proposed Acquisition would be less than one percent of the average daily traffic (ADT) for Interstate 78, U.S. Route 22, State Routes 378 and 412, and Third Street. The total daily increase in truck traffic would be approximately 36 percent for Riverside Drive. Riverside Drive is a two lane road serving two industrial shippers and dead ends at the Conrail intermodal facility. It is not a through street and 90 percent of the traffic is routed to the intermodal facility. The increase in truck traffic can be accommodated on Riverside Drive. It is SEA's preliminary conclusion that the increase in truck traffic will not have an adverse effect on the predominantly commercial vehicular traffic that travels this roadway. Therefore, the increases in truck traffic would have insignificant effects on the area roadways.

Table 5-PA-10
Traffic Analysis Summary for Allentown Intermodal Facility

Roadway Name	Roadway ADT	Increased Daily Truck Trips Using Roadway	Roadway ADT Percent Increase
Interstate 78	28,000[a]	99	0.35%
State Route 412	25,000[a]	99	0.40%
U.S. Route 22	40,000[a]	99	0.25%
State Route 378	35,800[a]	99	0.28%
Third Street	20,000[b]	198	0.99%
Riverside Drive	550[b]	198	0.360

[a] From Federal Railroad Administration Grade Crossing Database.
[b] From Pennsylvania Department of Transportation.

Intermodal Facility: Harrisburg - Rutherford (Dauphin County) (NS)

NS proposes to build a conventional intermodal facility adjacent to a Conrail Triple Crown Service facility, located east of Harrisburg near the town of Rutherford Heights. NS will also operate the Triple Crown Service facility. The conventional intermodal facility would replace an existing NS facility located in Harrisburg. The main gate for truck entry and exit movements to the existing Triple Crown Service facility is located on Grayson Road east of Mushroom Hill Road. Current plans for the proposed conventional facility indicate that the main gate for truck entry and exit movements would be located on Grayson Road. The combined facilities would be served by Interstates 83 and 283. The routes for trucks to and from Interstates 83 and 283 include U.S. Route 322, Rupp Hill Road and Grayson Road.

The Conrail Triple Crown Service facility currently handles approximately 68 trucks per day. The proposed Acquisition would increase this figure to a total of 398 trucks per day for the combined facility. This increase of 330 trucks per day corresponds to 660 additional truck trips per day. SEA assumed that half of the additional truck trips would use Interstate 83. The other half of the additional truck trips would use Interstate 283. All additional truck trips would use U.S. Route 322. Twenty-five percent of the additional truck trips would use Rupp Hill Road west of Mushroom Hill Road to Grayson Road. Most of the current truck traffic pattern to the intermodal facility departs Interstate 83 in an easterly direction at the U.S. Route 322 exit and travels on U.S. Route 322 beyond the facility before turning back in a westerly direction onto Rump Hill Road to access the facility. This route avoids the parallel yet serpentine route along Grayson Road to the intermodal link. However, some of the truck drivers prefer the Grayson Road route since it is shorter in length and presents less traffic than the U.S. Route 322 to Rump Hill Road access to the facility. Table 5-PA-11 summarizes SEA's analysis of traffic volumes to determine the effects of these additional truck trips on the roadways approaching the facilities.

The analysis results show that the total daily increase in truck traffic with the proposed Acquisition would be less than eight percent of the ADT for all the study area roadways.

Therefore, it is SEA's preliminary conclusion that these increases in truck traffic would have insignificant effects on the area roadways.

Table 5-PA-11
Traffic Analysis Summary for Harrisburg - Rutherford Intermodal Facility

Roadway Name	Roadway ADT	Increased Daily Truck Trips Using Roadway	Roadway ADT Percent Increase
Interstate 83	90,000[a]	330	0.37%
Interstate 283	45,000[a]	330	0.73%
U.S. Route 322	52,900[b]	660	1.25%
Rupp Hill Rd.	6,300[b]	165	2.62%
Grayson Rd.	8,490[b]	660	7.77%

[a] From Pennsylvania Department of Transportation.
[b] From Tri-County Regional Planning Commission.

Intermodal Facility: Morrisville - Morrisville (Bucks County) (NS)

NS would operate the existing Conrail Morrisville intermodal facility after the proposed Acquisition. This facility is located south of the U.S. Route 1 Bypass west of the Borough of Morrisville. The main gate for truck entry and exit movements is located on Cabot Boulevard. NS would expand the existing facility and would also construct a new Triple Crown Service facility on existing Conrail property in proximity to the existing facility. NS also plans to locate the main gate for the proposed Triple Crown Service facility on Cabot Boulevard. SEA considered the two facilities as one facility for analysis due to their being located adjacent to each other. The primary route for trucks between the combined facilities and Interstate 95 includes the U.S. Route 1 Bypass, Oxford Valley Road, and Cabot Boulevard. Cabot Boulevard is an industrial railway that ends at the gate to the existing facility.

The Conrail facility currently handles approximately 164 trucks per day. The proposed Acquisition would increase this figure to 296 trucks per day for the conventional facility and the new Triple Crown Service facility would add another 51 new trucks per day. This daily increase of 183 trucks per day combined for both facilities corresponds to 366 additional truck trips per day. SEA assumed that all of the additional truck trips would use the four roadways identified above. Table 5-PA-12 summarizes the analysis of traffic volumes to determine the effects of these additional truck trips on the roadways approaching the facilities.

As shown in the table, the total daily increase in truck traffic with the proposed Acquisition would be less than two percent of the ADT for Interstate 95, the U.S. Route 1 Bypass, and Oxford Valley Road. The total daily increase in truck traffic would be approximately 33 percent for Cabot Boulevard. This roadway serves several light industries as well as the existing and proposed intermodal facilities. Since it is a dead end access at the intermodal facility and most of the traffic is intermodal-based, this increase in truck traffic can be accommodated on Cabot

Boulevard. It is SEA's preliminary conclusion that the increase in truck traffic would not have an adverse effect on the predominantly commercial vehicle traffic that travels this roadway. Therefore, these increases in truck traffic would have insignificant effects on the area roadways.

Table 5-PA-12
Traffic Analysis Summary for Morrisville Intermodal Facility

Roadway Name	Roadway ADT	Increased Daily Trucks Trips Using Roadway	Roadway ADT Percent Increase
Interstate 95	50,200[a]	366	0.73%
U.S. Route 1 Bypass	56,700[a]	366	0.65%
Oxford Valley Rd.	31,800[a]	366	1.15%
Cabot Rd.	1,100[a]	366	33.27%

[a] From Delaware Valley Regional Planning Commission.

Intermodal Facility: Philadelphia - Greenwich (Philadelphia County) (CSX)

CSX proposes to build an intermodal facility on the site at Greenwich Yard, which is currently owned by Conrail. This facility would replace the existing CSX intermodal facility located at Snyder Avenue in South Philadelphia. The Greenwich facility would be located adjacent to the former Philadelphia Naval Base just south of Interstate 95, south of the existing Snyder Avenue location. The main gate for truck entry and exit movements for the new facility is planned to be located on Christopher Columbus Boulevard (formerly known as Delaware Avenue). Interstate highways 76 and 95 would serve the proposed facility. The primary truck routes to and from Interstates 76 and 95 would be along Front Street, Oregon Avenue, and Christopher Columbus Boulevard.

The proposed facility is expected to handle 272 trucks per day after the proposed Acquisition. This corresponds to 544 new truck trips per day. SEA assumed that half of the new truck trips would use Interstate 76. The other half of the new truck trips would use Interstate 95. All trucks trips would use Front Street, Oregon Avenue, and Christopher Columbus Boulevard. Table 5-PA-13 summarizes the analysis of traffic volumes to determine the effects of these additional truck trips on the roadways approaching the facility.

The analysis results show that the total daily increase in truck traffic with the proposed Acquisition would be less than nine percent of the ADT on all the study area roadways. Therefore, it is SEA's preliminary conclusion that these increases in truck traffic would have insignificant effects on the area roadways.

Table 5-PA-13
Traffic Analysis Summary for Philadelphia (Greenwich) Intermodal Facility

Roadway Name	Roadway ADT	Increased Daily Trucks Trips Using Roadway	Roadway ADT Percent Increase
Interstate 76	97,100 [a]	272	0.28%
Interstate 95	96,000 [b]	272	0.28%
S. Front St.	21,200 [a]	544	2.57%
Oregon Ave.	17,400 [a]	544	3.13%
Columbus Blvd.	6,300 [a]	544	8.63%

[a] From Delaware Valley Regional Planning Commission.
[b] From Pennsylvania Department of Transportation.

Intermodal Facility: Pittsburgh - Pitcairn (Allegheny County) (NS)

NS would operate the existing Conrail intermodal facility located near the town of Pitcairn east of Pittsburgh after the proposed Acquisition. The main gate for truck entry and exit movements is located on Wall Street east of State Route 48. The facility is served by Interstate 376. The primary route for trucks to and from Interstate 376 is State Route 48 and Wall Street.

Conrail opened this facility in 1996. For the analysis purposes, SEA is treating it as a new facility. The facility is expected to handle 114 trucks per day after the proposed Acquisition. This corresponds to 228 truck trips per day. SEA assumed that all of the additional truck trips would use the three roadways identified above. Table 5-PA-14 summarizes the analysis of traffic volumes to determine the effects of these additional truck trips on the roadways approaching the facility.

SEA's analysis results show that the total daily increase in truck traffic with the proposed Acquisition would be less than two percent of the ADT for all the study area roadways. Therefore, it is SEA's preliminary conclusion that these increases in truck traffic would have insignificant effects on the area roadways.

Table 5-PA-14
Traffic Analysis Summary for Pittsburgh (Pitcairn) Intermodal Facility

Roadway Name	Roadway ADT	Increased Daily Truck Trips Using Roadway	Roadway ADT Percent Increase
Interstate 376	51,400[a]	228	0.44%
State Route 48	14,200[a]	228	1.61%
Wall Street	15,600[a]	228	1.46%

[a] From Southwestern Pennsylvania Regional Planning Commission.

5-PA.11 PENNSYLVANIA TRANSPORTATION: NAVIGATION

To evaluate potential effects of train traffic on shipping where interaction could occur, SEA reviewed proposed Acquisition-related activities on rail line segments, new constructions (rail line connections only), and rail line abandonments that meet or exceed the Board's thresholds for environmental analysis and involve movable bridges.

SEA identified two movable bridges which carry rail traffic over navigable waterways in Pennsylvania on rail line segments that would meet or exceed the Board's environmental analysis thresholds. Conrail owns both bridges which are on rail line segment S-042. Both bridges cross the Schuylkill River in Philadelphia. The proposed Conrail Acquisition would result in an increase of 12.9 trains per day on both bridges.

As stated in Section 3.9.1 "Methods for Navigation Issues," the U.S. Coast Guard has jurisdiction over specific actions affecting navigable waters of the U.S. and in all instances waterborne navigation has the right-of-way. Therefore, any operating constraints due to the post-Acquisition activities would be placed on the railroad and not the waterborne users at movable bridges extending across navigable waterways. The railroads operate bridges under conditions established by the U.S. Coast Guard for the convenience of navigation. SEA evaluated the potential effect of the increase in train traffic on moving the bridges for navigation. Based on the analysis and the small proposed increase in train traffic, SEA expects no adverse impacts from the proposed Conrail Acquisition at these two bridges.

5- PA.12 PENNSYLVANIA AIR QUALITY

This section summarizes the change in air pollutant emissions that would result from the proposed Acquisition-related operational changes in the state of Pennsylvania. The primary air pollutant emission sources from trains and related activities include locomotive emissions on rail line segments, at rail yards, and at intermodal facilities. In addition to locomotive emissions, SEA evaluated emissions from other sources at intermodal facilities (idling trucks, lift cranes, etc.), motor vehicles idling near at-grade crossings, and decreases in truck emissions due to truck-to-rail freight diversions.

To analyze the air quality effects of the proposed Acquisition, SEA evaluated rail line segments, rail yards, and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis defined in Chapter 2, "Proposed Action and Alternatives." See Chapter 3, "Analysis Methods and Potential Mitigation Strategies," for additional information and a summary of the air quality analysis methodology. Appendix E, "Air Quality," contains a detailed description of methodology and detailed tables of results.

SEA addressed air pollutant emissions for sulfur dioxide (SO_2), volatile organic compounds (VOCs), particulate matter (PM), lead (Pb), nitrogen oxides (NO_x) and carbon monoxide (CO). SEA determined that emissions for SO_2, VOCs, PM and Pb would not exceed the emission

screening thresholds for environmental analysis in any county. However, SEA found that these thresholds would be exceeded for NO_x in various counties in 17 states, and CO in three counties in two states (IL and OH). NO_x air pollutant emissions may affect a region's ability to attain the National Ambient Air Quality Standards for ozone. CO emissions may affect a local area's ability to attain the National Ambient Air Quality Standards for CO.

Seven NS, eight CSX, and four Shared Assets Area (SA) rail line segments, one NS and three CSX intermodal facilities, and one NS and one CSX rail yard in Pennsylvania exceeded the Board's threshold for air quality analysis. Table 5-PA-15 shows the air quality evaluation process that was followed. SEA identified nineteen counties in Pennsylvania which include these rail facilities. For these counties, SEA summed emissions increases from changes on rail line segments and other activities and compared them to the air emission screening level that would require a permit if the source were a stationary source (rather than a mobile source, such as trains, trucks, and other vehicles). If the calculated emissions exceeded this screening level, SEA conducted a detailed emissions analysis known as a "netting analysis" in these counties. The netting analysis considered all emissions increases and decreases from proposed Acquisition-related activity changes. SEA compared the netting analysis results to the air emission screening level and performed additional analyses for counties where netting analysis results exceeded the air emission screening level. For these counties, SEA inventoried all county air pollutant emissions sources to evaluate if proposed Acquisition-relatedemissions represented more than one percent of all emissions sources in the county.

Chapter 4, "System-wide and Regional Setting, Impacts and Proposed Mitigation," contains a discussion of NO_x emissions, on a regional basis, relative to its potential contribution to O_3 formation in the Ozone Transport Region (OTR). Pennsylvania is in the OTR.

Table 5-PA-15
Pennsylvania Counties Evaluated in Air Quality Analysis

Counties Exceeding the Board's Activity Thresholds	O_3 Status [a]	Exceeds Emissions Screening Level Before Netting	Exceeds Emissions Screening Level After Netting	Exceeds 1% of County Emissions
Allegheny	N (Moderate)	Yes	Yes	No
Beaver	N (Moderate)	Yes	No	-
Bucks	N (Severe)	Yes	No	-
Cumberland	N (Marginal)	Yes	No	-
Dauphin	N (Marginal)	Yes	Yes	No
Delaware	N (Severe)	Yes	Yes	No

Table 5-PA-15
Pennsylvania Counties Evaluated in Air Quality Analysis

Counties Exceeding the Board's Activity Thresholds	O_3 Status [a]	Exceeds Emissions Screening Level Before Netting	Exceeds Emissions Screening Level After Netting	Exceeds 1% of County Emissions
Erie	N (Marginal)	Yes	Yes	Yes
Fayette	N (Moderate)	Yes	Yes	Yes
Franklin	N (incompl.[b])	Yes	No	-
Lancaster	N (Marginal)	No	-	-
Lawrence	N (incompl.[b])	Yes	Yes	Yes
Lebanon	N (Marginal)	No	-	-
Northampton	N (Marginal)	No	-	-
Philadelphia	N (Severe)	Yes	Yes	No
Somerset	N (Marginal)	Yes	Yes	Yes
Susquehana	N (incompl.[b])	No	-	-
Washington	N (Moderate)	No	-	-
Westmoreland	N (Moderate)	Yes	No	-
York	N (Marginal)	No	-	-

[a] A= Attainment Area, M= Maintenance Area, N= Nonattainment Area, as defined in the Clean Air Act.

[b] incompl.= incomplete data to determine severity.

The emissions estimates presented in Appendix E, "Air Quality," show that the increased county-wide air pollutant emissions from the facilities described above exceed the threshold for thirteen counties in Pennsylvania. SEA's analysis results for these counties are presented below:

5-PA.12.1 County Analysis

Allegheny County

EPA has designated Allegheny County as a moderate nonattainment area for O_3. Table 5-PA-16 shows that the net NO_x emissions increase in Allegheny County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 50 tons per year used to determine if emissions changes are potentially significant. However, the increased NO_x emissions are less than one percent of the existing county-wide NO_x emissions. Therefore, SEA does not consider the net emissions increase to be significant.

Table 5-PA-16
Allegheny County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x
Rail Segment (CSX)	Cumberland, MD, to Sinns, PA	39.00
Rail Segment (CSX)	Sinns, PA, to Brownsville, PA	169.38
Rail Segment (CSX)	Sinns, PA, to Rankin Jct, PA	84.79
Rail Segment (CSX)	Rankin Jct., PA, to New Castle, PA	286.28
Rail Segment (NS)	Jacks Run, PA, to Conway East, PA	-72.33
Rail Segment (NS)	Marysville, PA, to Pitcairn, PA	-3.17
Rail Segment (NS)	Pitcairn, PA, to Thomson, PA	-15.11
Rail Segment (NS)	Thomson, PA, to Jacks Run, PA	-96.05
Rail Segment (NS)	Thomson, PA, to Brownsville, PA	-149.28
Rail Segment (NS)	Etna, PA, to Federal Street, PA	-0.24
Rail Segment (NS)	Avonmore Coal, PA, to Etna, PA	1.72
Rail Segment (NS)	Jacks Run, PA, to Pitcairn, PA	4.05
Rail Yard (CSX)	Demmler,	-6.72
Rail Yard (CSX)	Glenwood,	-4.09
Intermodal Facility (NS)	Pitcairn,	18.55
Truck Diversion (both)	County-wide	-28.77
At-grade Crossings (both)	Affected Crossings >5000 Vehicles/Day[a]	0.30
Total Acquisition-Related Net NO_x Emissions Increase		228.31

Table 5-PA-16
Allegheny County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x
NO_x Emissions Screening Level		50.00
Existing (1995) County Total NO_x Emissions		58,625.10
Percent Increase in County NO_x Emissions		0.39%

[a] "Affected Crossings" are those with an increase in rail segment activity over Board air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Beaver County

EPA has designated Beaver County as a moderate nonattainment area for O_3. Table 5-PA-17 shows that the net NO_x emissions change in Beaver County, considering all proposed Acquisition-relatedemissions changes, are below the emissions screening threshold of 50 tons per year used to determine if emissions changes are potentially significant. Therefore, SEA did not perform further analysis for Beaver County.

Table 5-PA-17
Beaver County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions
Rail Segment (CSX)	Rankin Jct., PA, to New Castle, PA	260.91
Rail Segment (NS)	Rochester, PA, to Youngstown, OH	26.52
Rail Segment (NS)	Yellow Creek, OH, to Rochester, PA	-6.29
Rail Segment (NS)	Rochester, PA, to Alliance, OH	-140.96
Rail Segment (NS)	Rochester, PA, to Conway East, PA	-30.11
Rail Segment (NS)	Jacks Run, PA, to Conway East, PA	-35.30
Rail Yard (NS)	Conway East, PA	-22.50
Rail Yard (NS)	Conway West, PA	-13.92
Truck Diversion (both)	County-wide	-5.36
Total Acquisition related Net NO_x Emissions Changes		32.99
NO_x Emissions Screening Level		50.00

Table 5-PA-17
Beaver County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions
Existing (1995) County Total NO_x Emissions		34,196.24
Percent Increase in County NO_x Emissions		0.10%

Bucks County

EPA has designated Bucks County as a severe nonattainment area for O_3. Table 5-PA-18 shows that the net NO_x emissions increase in Bucks County, considering all proposed Acquisition-related emissions changes, is below the emissions screening threshold of 25 tons per year used to determine if emissions changes are potentially significant. SEA did not consider the net emissions increase to be significant.

Table 5-PA-18
Bucks County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions
Rail Segment (NS)	Morrisville, PA, to Abrams, PA	4.09
Rail Segment (NS)	Oak Island, NJ, to Morrisville, PA	0.24
Rail Segment (SA)	Morrisville, PA, to Zoo, PA	52.77
Rail Segment (SA)	Midway, NJ, to Morrisville, PA	3.35
Rail Segment (CSX)	CP Newtown Jct., PA, to CP Wood, PA	2.96
Rail Segment (CSX)	CP Wood, PA, to Trenton, NJ	-1.95
Rail Yard (CSX)	Morrisville, PA	-34.85
Rail Yard (NS)	Morrisville, PA	-1.35
Intermodal Facility (NS)	Morrisville, PA	21.49
Truck Diversions (both)	County-wide	-27.69
Total Acquisition-related Net NO_x Emissions Increase		19.06

Cumberland County

EPA has designated Cumberland County as a marginal nonattainment area for O_3. Table 5-PA-19 shows that the net NO_x emission change in Cumberland County, considering all proposed Acquisition-related emissions changes, is below the emissions screening threshold of 50 tons per year used to determine if emissions changes are potentially significant. Therefore, SEA determined that the emission changes would not be significant.

Table 5-PA-19
Cumberland County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions
Rail Segment (NS)	Marysville, PA, to Enola, PA	-13.36
Rail Segment (NS)	Enola, PA, to Wago Yorkhaven, PA	-33.51
Rail Segment (NS)	Harrisburg, PA, to Hagerstown, PA	233.82
Truck Diversion (both)	County-wide	-270.90
At-grade Crossings (both)	Affected Crossings >5000 Vehicles/Day[a]	0.04
Total Acquisition-related Net NO_x Emissions Changes		-83.91
NO_x Emissions Screening Level		50.00

[a] "Affected Crossings" are those with an increase in rail segment activity over Board air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Dauphin County

EPA has designated Dauphin County as a marginal nonattainment area for O_3. Table 5-PA-20 shows that the net NO_x emission increase in Dauphin County, considering all proposed Acquisition-related emission changes, is slightly above the emissions screening threshold of 50 tons per year used to determine if emissions changes are potentially significant. However, the increased NO_x emissions are less than one percent of the existing county-wide NO_x emissions. Therefore, SEA considered the net emissions increase to be insignificant.

Table 5-PA-20
Dauphin County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Harrisburg, PA, to Rutherford, PA	9.19
Rail Segment (NS)	WM Jct., PA, to Rutherford, PA	15.42
Rail Segment (NS)	Harrisburg, PA, to Shocks, PA	21.92
Rail Segment (NS)	Harrisburg, PA, to Riverton Jct., VA	5.76
Rail Segment (NS)	Harrisburg, PA, to Marysville, PA	48.96
Rail Segment (NS)	Rockville, PA, to Watsontown, PA	42.25
Rail Yard (NS)	Enola	-1.08
Rail Yard (NS)	Harrisburg, PA	6.03
Intermodal Facility (NS)	Harrisburg, PA	5.16
Intermodal Facility (NS)	Harrisburg, PA	0.20
Truck Diversion (both)	County-wide	-94.94
Total Acquisition-related Net NO_x Emissions Increase		58.87
NO_x Emissions Screening Level		50.00
Existing (1995) County Total NO_x Emissions		9,584.02
Percent Increase in County NO_x Emissions		0.61%

Delaware County

EPA has designated Delaware County as a severe nonattainment area for O_3. Table 5-PA-21 shows that the net NO_x emissions increase in Delaware County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 25 tons per year used to determine if emissions changes are potentially significant. However, the increased NO_x emissions are less than one percent of the existing county-wide NO_x emissions. Therefore, SEA does not consider the net emissions increase to be significant.

Table 5-PA-21
Delaware County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	RG, PA, to Wilsmere, PA	46.64
Rail Segment (SA)	Arsenal, PA, to Davis, DE	83.92
Truck Diversion (both)	County-wide	-26.19
At-grade Crossings (both)	Affected Crossings >5000 Vehicles/Day[a]	0.17
Total Acquisition-related Net NO_x Emissions Increase		104.54
NO_x Emissions Screening Level		25.00
Existing (1995) County Total NO_x Emissions		23,761.12
Percent Increase in County NO_x Emissions		0.44%

[a] "Affected Crossings" are those with an increase in rail segment activity over Board air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Erie County

EPA has designated Erie County as a marginal nonattainment area for O_3. Table 5-PA-22 shows that the net NO_x emissions increase in Erie County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 50 tons per year used to determine if emissions changes are potentially significant. The increased net NO_x emissions are also over one percent of the existing county-wide NO_x emissions. Because these emissions could contribute to O_3 formation on a regional level, refer to Chapter 4 for further discussion of the potential effects on regional air quality.

Table 5-PA-22
Erie County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Buffalo, NY, to Ashtabula, OH	376.43
Rail Segment (CSX)	Buffalo Seneca, NY, to Ashtabula, OH	-51.89
Rail Yard (CSX)	Erie, PA	-1.70
Truck Diversion (both)	County-wide	-13.99
At-grade Crossings (both)	Affected Crossings >5000 Vehicles/Day[a]	0.86

Table 5-PA-22
Erie County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Total Acquisition-related Net NO_x Emissions Increase		309.71
NO_x Emissions Screening Level		50.00
Existing (1995) County Total NO_x Emissions		14,129.50
Percent Increase in County NO_x Emissions		2.19%

[a] "Affected Crossings" are those with an increase in rail segment activity over Board air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Fayette County

EPA has designated Fayette County as a moderate nonattainment area for O_3. Table 5-PA-23 shows that the net NO_x emissions increase in Fayette County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 50 tons per year used to determine if emissions changes are potentially significant. The increased net NO_x emissions are also over one percent of the existing county-wide NO_x emissions. Because these emissions could contribute to O_3 formation on a regional level, refer to Chapter 4 for further discussion of the potential effects on regional air quality.

Table 5-PA-23
Fayette County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Cumberland, MD, to Sinns, PA	190.46
Rail Segment (CSX)	Sinns, PA, to Brownsville, PA	100.65
Rail Segment (SA)	West Brownsville,PA to Catawba Jct., WV	22.60
Truck Diversion (both)	County-wide	-6.82
Total Acquisition-related Net NO_x Emissions Increase		306.89
NO_x Emissions Screening Level		50.00
Existing (1995) County Total NO_x Emissions		7,971.25
Percent Increase in County NO_x Emissions		3.85%

Franklin County

EPA has designated Franklin County as a nonattainment area for O_3. Table 5-PA-24 shows that the net NO_x emissions increase in Franklin County, considering all proposed Acquisition-related emissions changes, is below the emissions screening threshold of 100 tons per year used to determine if emissions changes are potentially significant. Therefore, SEA does not consider the net NO_x emissions increase to be significant.

Table 5-PA-24
Franklin County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons per year)
Rail Segment (NS)	Harrisburg, PA, to Riverton Jct., VA	158.61
Rail Segment (CSX)	Hagerstown, MD, to Lurgan, PA	-23.52
Truck Diversion (both)	County-wide	-128.73
Total Acquisition-related Net NO_x Emissions Increase		6.36
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		5,926.39
Percent Increase in County NO_x Emissions		0.11%

Lawrence County

EPA has designated Lawrence County as a nonattainment area for O_3. Table 5-PA-25 shows that the net NO_x emissions increase in Lawrence County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons per year used to determine if emissions changes are potentially significant. The increased net NO_x emissions are also over one percent of the existing county-wide NO_x emissions. Because these emissions could contribute to O_3 formation on a regional level, refer to Chapter 4 for further discussion of the potential effects on a regional air quality.

Table 5-PA-25
Lawrence County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons per year)
Rail Segment (CSX)	Rankin Jct., PA, to New Castle, PA	100.26
Rail Segment (CSX)	New Castle, PA, to Youngstown, OH	81.09

Table 5-PA-25
Lawrence County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons per year)
Rail Segment (NS)	Rochester, PA, to Youngstown, OH	39.08
Rail Segment (NS)	Rochester, PA, to Alliance, OH	-39.70
Rail Yard (CSX)	New Castle, PA	-11.36
Truck Diversion (both)	County-wide	-3.37
At-grade Crossings (both)	Affected Crossings >5000 Vehicles/Day*	0.02
Total Acquisition-Related Net NO_x Emissions Increase		166.02
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		11,476.18
Percent Increase in County NO_x Emissions		1.45%

* "Affected Crossings" are those with an increase in rail segment activity over Board air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Philadelphia County

EPA has designated Philadelphia County as a severe nonattainment area for O_3. Table 5-PA-26 shows that the net NO_x emissions increase in Philadelphia County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 25 tons per year used to determine if emissions changes are potentially significant. However, the increased NO_x emissions are less than one percent of the existing county-wide NO_x emissions. Therefore, SEA does not consider the net emissions increase to be significant.

Table 5-PA-26
Philadelphia County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons per year)
Rail Segment (CSX)	RG, PA, to Wilsmere, DE	11.40
Rail Segment (CSX)	Park Jct., PA, to RG, PA	-24.55
Rail Segment (CSX)	RG, PA, to Field, PA	3.97
Rail Segment (CSX)	Field, PA, to Belmont, PA	5.04

Table 5-PA-26
Philadelphia County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons per year)
Rail Segment (CSX)	Park Jct., PA, to Belmont, PA	0.58
Rail Segment (CSX)	Belmont, PA ,to West Falls, PA	3.04
Rail Segment (CSX)	West Falls, PA, to CP Newtown, PA	4.33
Rail Segment (CSX)	CP Newtown, PA, to CP Wood, PA	4.05
Rail Segment (CSX)	South Philadelphia, PA, to Field, PA	37.02
Rail Segment (CR/NS)	Arsenal, PA, to Greenwich, PA	-0.73
Rail Segment (SA)	Arsenal, PA, to Davis, DE	29.34
Rail Segment (SA)	Phil Frankford, PA, to Camden, NJ	3.73
Rail Segment (SA)	Park Jct., PA, to Phil Frankford, PA	7.68
Rail Segment (SA)	Morrisville, PA, to Zoo, PA	42.21
Rail Yard (CSX)	Frankford Jct., PA	-0.54
Rail Yard (SA)	Greenwich, PA	13.23
Rail Yard (CSX)	Frankfort, PA	-0.26
Rail Yard (CSX)	West Falls, PA	-0.34
Rail Yard (CSX)	East Side	-12.34
Intermodal Facility (CSX)	Greenwich, PA	51.85
Intermodal Facility (CSX)	Snyder	-48.23
Intermodal Facility (NS)	New Facility	5.97
Truck Diversion (both)	County-wide	-58.96
Total Acquisition-related Net NO_x Emissions Increase		87.49
NO_x Emissions Screening Level		25.00
Existing (1995) County Total NO_x Emissions		56,710.88
Percent Increase in County NO_x Emissions		0.15%

Somerset County

EPA has designated Somerset County as a marginal nonattainment area for O_3. Table 5-PA-27 shows that the net NO_x emissions increase in Somerset County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 50 tons per year used to determine if emissions changes are potentially significant. The increased net NO_x emissions are also over one percent of the existing county-wide NO_x emissions. Because these emissions could contribute to O_3 formation on a regional level, refer to Chapter 4 for further discussion of the potential for effects on a regional air quality.

Table 5-PA-27
Somerset County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons per year)
Rail Segment (CSX)	Cumberland, MD to Sinns, PA	252.26
Truck Diversion (both)	County-wide	-70.79
Total Acquisition-related Net NO_x Emissions Increase		181.47
NO_x Emissions Screening Level		50.00
Existing (1995) County Total NO_x Emissions		3,921.09
Percent Increase in County NO_x Emissions		4.63%

Westmoreland County

EPA has designated Westmoreland County as a moderate nonattainment area for O_3. Table 5-PA-28 shows that the net NO_x emissions change in Westmoreland County, considering all Acquisition-related emissions changes is below the emissions screening threshold of 50 tons per year used to determine whether emissions changes are potentially significant.

Table 5-PA-28
Westmoreland County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons per year)
Rail Segment (CSX)	Cumberland, MD, to Sinns, PA	85.61
Rail Segment (CSX)	Sinns, PA, to Brownsville PA	67.92
Rail Segment (NS)	Avonmore Coal, PA, to Etna, PA	1.46
Rail Segment (NS)	Marysville, PA, to Pitcairn, PA	-268.65
Truck Diversion (both)	County-wide	-85.57
At-grade Crossings (both)	Affected Crossings >5000 Vehicles/Day[a]	0.03
Total Acquisition-related Net NO_x Emissions Change		-199.20
NO_x Emissions Screening Level		50.00

[a] "Affected Crossings" are those with an increase in rail segment activity over Board air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

5-PA.12.2 Summary of Potential Effects and Preliminary Recommended Mitigation

While there are localized increases in emissions in some counties, the increases are not likely to affect compliance with air quality standards. Therefore, SEA has determined that air quality will not be significantly affected and no mitigation is necessary. See system-wide and regional discussion in Section 4.12 "Air Quality."

5-PA.13 PENNSYLVANIA NOISE

To analyze the potential noise impacts of the proposed Acquisition, SEA evaluated rail line segments, rail yards and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis of noise. Although new construction projects and rail line abandonments can result in noise increases, the noise effects would be temporary and therefore, SEA did not evaluate them.

5-PA.13.1 Proposed Activities

Train noise sources include diesel locomotive engine and wheel/rail interaction noise (or wayside noise) and horn noise. Wayside noise affects all locations in the vicinity of the rail facility, and generally diminishes with distance from the source. Horn noise is an additional noise source at grade crossings, and also generally diminishes with distance. SEA performed an analysis to identify rail line segments, rail yards and intermodal facilities where the proposed changes in operations meet or exceed the Board's environmental analysis thresholds at 49 CFR

1105.7(e)(6). Where the proposed rail activity would exceed these thresholds, SEA calculated the 65 dBA L_{dn} noise contours for the pre- and post-Acquisition conditions. SEA based the noise level impact assessment on the projected activity level data provided by the railroads. SEA counted sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) within the noise contours for both pre-Acquisition and post-Acquisition operating conditions.

The CSX and NS rail line segments, intermodal facilities and rail yards that would experience increases in traffic or activity meeting the Board's environmental analysis thresholds for Pennsylvania are listed in Tables 5-PA-29, 5-PA-30, and 5-PA-31. Table 5-PA-32 shows the facilities with noise sensitive receptors exceeding 65 dBA L_{dn}.

The counties where these facilities are located are listed in Section 5-PA.2 on Proposed Conrail Acquisition Activities in Pennsylvania.

Table 5-PA-29
Rail Line Segments That Meet or Exceed Board Thresholds for Noise Analysis

Site ID	Segment		Trains Per Day			Percent Change in Gross Ton Miles
	From	To	Pre-Acquisition	Post-Acquisition	Increase	
C-082[a]	Rankin Jct.	New Castle	28.9	38.3	9.4	74
C-083	RG (Phila.)	Field	0	16.0	16.0	na
C-085	Sinns	Brownsville	1.5	10.8	9.3	na
C-086[a]	Sinns	Rankin Jct.	30.8	40.2	9.4	77
N-070	Ashtabula, OH	Buffalo, NY	13.0	25.2	12.2	121
N-090[a]	Harrisburg	Rutherford	44.3	57.9	13.6	4
N-091	Harrisburg	Riverton Jct., VA	11.1	19.6	8.5	82
N-093	Harrisburg	Shocks	2.2	6.0	3.8	148
S-040[a]	Arsenal	Davis, DE	2.3	10.5	8.2	63
S-042	South Phil	Field	8.2	21.1	12.9	303

[a] SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

Table 5-PA-30
Intermodal Facilities That Meet or Exceed Board Thresholds for Noise Analysis

Site ID	Facility Location	Trucks Per Day		Percent Change in Traffic on Local Roads	Change in dBA	Approx. distance (feet) to 65 dBA L_{dn} contour
		Pre-Acquisition	Post-Acquisition			
CM-05[a]	Philadelphia - Greenwich[b]	0	272	0.3 - 8.6	N/A	250
NM-14[a]	Allentown	39	138	0.25 - 36	5.5	57
NM-15[a]	Harrisburg - Rutherford	68	398	0.4 - 7.8	N/A	250
NM-16[a]	Philadelphia - Morrisville	164	347	0.65 - 33.3	3.2	209
NM-17[a]	Pittsburgh - Pitcairn	0	114	0.44 - 1.6	N/A	250

[a] SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

[b] Includes both the CSX intermodal facility and Shared Assets yard.

Table 5-PA-31
Rail Yard Facilities That Meet or Exceed Board Thresholds for Noise Analysis

Site ID	Facility Location	Rail Cars Per Day		Percent Change in Rail Cars Per Day	Change in dBA	Approx. distance (feet) to 65 dBA Ldn contour
		Pre-Acquisition	Post-Acquisition			
NY-09[a]	Harrisburg	117	246	110	< 2	----

[a] SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

Table 5-PA-32
Noise Sensitive Receptors In Pennsylvania Exceeding 65 dBA L_{dn}

Site ID	Name	Pre-Acquisition	Post-Acquisition	Increase
Rail Line Segments				
C-083	RG (Phila)-New Castle	0	0	0
C-085	Sinns-Brownsville	549	994	445
N-070	Ashtabula, OH-Buffalo, NY	1646	2416	770
N-091	Harrisburg-Riverton Jct., VA	611	1000	389
N-093	Harrisburg-Shocks	2	86	84
S-042	South Phil-Field	0	0	0

5-PA.13.2 Summary of Potential Effects and Preliminary Recommended Noise Mitigation

There are different noise mitigation techniques used to reduce horn noise and wayside noise. These different types of noise and mitigation techniques are as follows:

Grade Crossing Noise Effects. The Federal Railroad Administration (FRA) has indicated that it will propose new rules on train horn blowing procedures in 1998. These new rules may allow communities to apply for an exception to horn blowing at certain grade crossings that meet explicit criteria. These criteria relate to so-called "quiet zones" where FRA would no longer require train engineers to sound the train horn at grade crossings with special upgraded safety features. Examples of such safety features include four-quadrant gates and median barriers that preclude motorists from entering the crossings while the crossing arm is down. Until FRA develops and implements these regulations, these measures are not feasible for SEA to require as mitigation. However, communities will have the opportunity to qualify for "quiet zones" once the FRA regulations are in place.

Wayside Noise Effect. Wayside noise is the sound of a train as it passes by. Wayside noise is comprised of steel wheel/ rail interaction noise, and locomotive diesel engine noise. This type of noise can be reduced by constructing barriers between the railway noise source and adjoining land uses, and by installing building sound insulation. Noise barriers include earth berms and walls that block the sound. Rail lubrication can be used to reduce "wheel squeal" noise on curved track. Building sound insulation consists of special windows and other building treatments that reduce interior noise. Noise barriers are the preferred type of noise mitigation for this project since barriers can be built on railroad property. Additional discussion of noise mitigation measures is included in Appendix F, "Noise Methods."

As noted above, for receptors near grade crossings that would experience increases in noise resulting from horn sounding, mitigation is not currently feasible. For areas affected by wayside noise, SEA considered rail line segments eligible for noise mitigation for noise sensitive receptors exposed to at least 70 dBA L_{dn} and an increase of at least 5 dBA L_{dn} due to increased rail activity.

It is SEA's preliminary conclusion that no rail line segments, rail yards, or intermodal facilities in the state of Pennsylvania warrant noise mitigation according to the project mitigation criteria.

5-PA.14 PENNSYLVANIA ENVIRONMENTAL JUSTICE

As part of its analysis, SEA examined activities associated with the proposed Conrail Acquisition for environmental justice impacts (disproportionately high and adverse impacts to minority and low-income populations) in accordance with Executive Order 12898. As described in the Environmental Justice Methodology in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," SEA first categorized the nature of the populations in areas where Acquisition-related activities are proposed. SEA determined whether the population in such

areas met the following environmental justice thresholds: (1) greater than 50 percent of the population is minority or low-income, or (2) the minority or low-income population percentage is 10 percent greater than the minority or low-income population percentage in the county.

Next, SEA ascertained whether this population fell within an area of potential effect. SEA defined a typical zone on either side of a rail line segment or proposed construction site, or bordering a railroad intermodal facility or rail yard, as an area of potential effect. In general, the extent of an area of potential effect may vary depending on the nature of the changes in rail activity associated with it, but such areas typically extend 400 to 1500 feet out from the rail line segment or facility being analyzed.

SEA then evaluated these areas of potential effect for proposed Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis (new constructions rail line segments, intermodal facilities and truck access routes, and rail yards). In this analysis, SEA evaluated potential impacts on safety, transportation, air quality, noise, cultural resources, hazardous waste sites, hazardous materials transport, natural resources, and land use/socioeconomic effects. SEA also visited the sites of proposed construction for new rail line connections, rail line segments, intermodal facilities, and rail yards.

SEA developed and executed expanded public outreach efforts for those jurisdictions that met both SEA's thresholds for environmental justice and the Board's thresholds for environmental significance. SEA designed the public outreach process to seek widespread notice and dissemination of SEA's environmental impact analysis; provide additional opportunities for community input to the NEPA process; solicit information about cumulative effects in minority and low-income communities; and allow minority and low-income communities to assist in fashioning appropriate alternatives and mitigation measures. SEA is placing additional copies of the Draft EIS in jurisdictions with high proportions of minority and low-income populations that do not have significant environmental impacts which could result from the proposed Acquisition.

This section presents the results of those evaluations and analysis. A complete list of all the sites analyzed for environmental justice impacts is presented in Appendix K.

5-PA.14.1 Pennsylvania Environmental Justice Setting

There are no new constructions proposed in the state of Pennsylvania as part of the proposed Conrail Acquisition. Rail yards, intermodal facilities and intermodal routes in Pennsylvania with proposed changes did not meet either the minority or low-income population thresholds for further environmental justice analysis.

Rail Line Segments

Table 5-PA-33 presents the existing minority and low-income composition of the areas of potential effect surrounding the eight rail line segments in Pennsylvania that meet the environmental justice population thresholds.

Table 5-PA-33
Pennsylvania Environmental Justice Summary for Rail Line Segments

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low Income Population
Dauphin County	237,813	18.6%	10.1%	NA	
Harrisburg - Rutherford (N-090)	2,839	29.1%	14.7%	Yes	No
Dauphin, Perry Counties	278,985	16.0%	9.8%	NA	
Harrisburg - Marysville (N-092)	1,648	30.9%	16.1%	Yes	No
Mercer, Middlesex, Counties, NJ, Bucks County, PA	1,538,778	18.0%	5.2%	NA	
Midway, NJ - Morrisville, PA (S-031)	5,720	56.7%	18.1%	Yes	Yes
Bucks County, Philadelphia	2,126,751	37.3%	16.1%	NA	
Morrisville -Zoo (S-041)	23,998	48.5%	26.6%	Yes	Yes
Philadelphia	1,585,577	47.9%	20.3%	NA	
Philadelphia - Field (S-042)	9,040	77.5%	42.0%	Yes	Yes
RG - Field (C-083)	502	78.6%	48.6%	Yes	Yes
Field - Belmont (C-080)	1,654	94.7%	33.8%	Yes	Yes
Allegheny, Beaver, Lawrence Counties	1,618,788	11.7%	11.9%	NA	
Rankin Jct. - New Castle, DE (C-082)	19,968	12.0%	22.0%	No	Yes
Allegheny County	1,336,449	13.0%	11.5%	NA	

Table 5-PA-33
Pennsylvania Environmental Justice Summary for Rail Line Segments

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low Income Population
Sinns - Rankin Jct. (C-086)	3,617	42.2%	30.6%	Yes	Yes
Allegany County, MD, Allegheny, Bedford, Fayette, Somerset, Westmoreland Counties, PA	2,053,204	9.4%	12.4%	NA	
Cumberland, MD - Sinns, PA (C-033)	9,358	7.7%	25.2%	No	Yes

5-PA.14.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Table 5-PA-34, which follows, summarizes the two rail line segments that met either the minority or low-income population thresholds, and for which SEA has identified a potentially significant environmental effect. Sites and rail line segments that met the population thresholds but would not be affected significantly by the proposed Acquisition were not analyzed further and are not discussed below. Public Outreach efforts are described for the rail line segment for which significance thresholds have been exceeded. Mitigation strategies for Pennsylvania are described at the end of this section.

Table 5-PA-34
Pennsylvania Impacts Summary

Location (Area of Potential Effect)	Resource Impacts							
	Noise	Air Quality	Hazardous Materials Transport	Hazardous Materials	Natural Resources	Trans-porta-tion / Safety	Land Use	Cultural Resources
Rail Line Segments								
Cumberland, MD - Sinns, PA (C-033)	N	NA	N	N	NA	Y	NA	NA

Table 5-PA-34
Pennsylvania Impacts Summary

Location (Area of Potential Effect)	Resource Impacts							
	Noise	Air Quality	Hazardous Materials Transport	Hazardous Materials	Natural Resources	Transportation / Safety	Land Use	Cultural Resources
Harrisburg - Rutherford (N-090)	N	NA	N	N	NA	Y	NA	NA

Y = Impact that meets Board thresholds for Significance
N = No impact
NA = Not applicable/No Environmental Analysis performed according to Scope

Impact Analysis - Rail Line Segments

Cumberland, MD - Sinns, PA (C-033). Based on currently available information, SEA has identified one potentially significant highway/rail at-grade crossing delay at Main Street in West Newton, PA where substantial traffic delays could result from the proposed increase in train traffic, from 27.7 to 32.8 trains per day along this CSX rail line segment. This rail line segment begins at Cumberland, Maryland and traverses northwest towards Pittsburgh, Pennsylvania, ending at McKeeseport. However, the potential impact is located approximately ten miles south of the identified environmental justice population located predominately in McKeeseport.

Based on currently available information, SEA's preliminary conclusion is that, given the distance between the potentially at-risk population and the impact site, there would be no environmental justice impacts on the Cumberland, MD to Sinns, PA rail line segment.

Harrisburg - Rutherford (N-090). Based on currently available information, SEA identified this rail line segment as meeting the thresholds for freight safety because the interval between potential train accidents per mile is less than 100 years (88 year interval). An increase in the frequency of freight accidents could result from the proposed increase in train traffic, from 44.3 to 57.3 trains per day along this NS rail line segment. This rail line segment runs west from the Rutherford Yard, located east of Harrisburg, to the Susquehanna River south of Harrisburg's city center.

Populations along this particular rail line segment exceed the environmental justice threshold for minority populations because the minority population percentage in the area of potential effect is more than ten percent greater than the minority population percentage in the County. The affected population would be located within Dauphin County. The minority population along this rail line segment is predominately African-American and Hispanic. Based on the potential environmental effects identified and the characteristics of the population affected, the increase

proposed in activity along this rail line segment may result in a potential environmental justice effect. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional public outreach in the Harrisburg area.

Public Outreach

SEA has identified minority and/or low income populations in the City of Harrisburg, PA, that may be affected by the proposed Acquisition. The area identified is located just east of the Susquehanna River in the southern part of the city. A variety of media outlets are being used to announce the release of the Draft EIS and to engage the potentially affected population in the evaluation of effects on the community. SEA is notifying the community through newspapers, radio stations, local organizations, libraries and elected officials.

Mitigation

SEA is currently developing additional mitigation strategies in coordination with the local communities in surrounding the sites and rail line segments and will report on these strategies in the Final EIS. As SEA continues to perform public outreach and additional site-specific noise analysis, SEA will determine the extent and nature of the potential environmental justice impacts. If an environmental justice impact exists, SEA will determine if mitigation would be practicable. This coordination with the local communities as part of the on-going public outreach process will be reported in the Final EIS.

5-PA.15 PENNSYLVANIA CUMULATIVE EFFECTS

Within the State of Pennsylvania, the Applicants propose the following activities that meet or exceed the Board's thresholds for environmental analysis: increased traffic on 19 rail line segments, increased rail car handling at 2 rail yards ,and increased truck traffic at 5 intermodal facilities. Table 5-PA-35 addresses other potential actions brought to SEA's attention that, when combined with the proposed Acquisition, could contribute to a cumulative impact. SEA was made aware of these activities through site visits and public comment. Local agencies provided the information below to SEA within the schedule specified in the scope for review and analysis.

Table 5-PA-35
Information Provided to SEA About Other Activities or Projects

Action-Type	Site	Information from Site Visit or Public Comment	Relationship to Proposed Acquisition
Rail Line Segment	County of Montgomery (PA)	SEPTA planning underway for passenger service on Morrisville Line (Morrisville to Norristown) and Harrisburg Line (Norristown to Reading).	Related. Freight traffic may limit potential for passenger service to expand.

Table 5-PA-35
Information Provided to SEA About Other Activities or Projects

Action-Type	Site	Information from Site Visit or Public Comment	Relationship to Proposed Acquisition
Intermodal	Greenwich (PA)	Concerns about access to intermodal facility, at-grade crossings and increased traffic.	Related. New facility that may interact with existing railroad facilities.

Cumulative Effects Findings

The results of the SEPTA planning study may indicate local intent to expand commuter rail. If the proposal or project is funded, it may represent a potential cumulative effect for that portion of the affected rail line. SEA has also determined that there may be a potential cumulative effect associated with the use of the Morrisville Line and the Harrisburg Line.

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any other activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no other significant cumulative effects associated with the proposed Acquisition in the State of Pennsylvania.

Cumulative Effects Mitigation Measures

SEA has encouraged the Applicants to meet SEPTA, the transit agency responsible for the rail passenger study, to ensure that the proposed Acquisition can be accomplished without adversely affecting commuter rail plans. Due to a lack of other cumulative effects, no other mitigation measures are necessary.

5-PA.16 PENNSYLVANIA AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. Table 5-PA-36 provides a list of agencies and local governments that have submitted environmental comments for the State of Pennsylvania. A complete list of entities that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-PA-36
Agencies in Pennsylvania Submitting Environmental Comments

Entity	Nature of Comment(s)
Beaver County Planning Commission	Biological resources, water resources, environmental justice, and cultural resources
Berks County Planning Commission	Air
Cambria County	Land use
Lancaster County Transportation Coordinating Committee	At-grade crossing safety, commuter operations, and safety
Monaca, Borough of	Traffic congestion and emergency response
Montgomery County	Commuter operations
Pennsylvania Historical and Museum Commission	Cultural resources
Pennsylvania Department of Transportation	Commuter operations and safety
Philadelphia, City of - Law Department	Hazardous materials
Philadelphia, City of - Industrial Development Corp.	Commuter operations and abandonment
Port Richmond Community Council Incorporated, et al.	Land use
Southeastern Pennsylvania Transportation Authority	Commuter operations
U.S. Senator Arlen Specter	Safety and commuter operations

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.

SEA recognizes special concerns raised in the city of Erie. These concerns are addressed below.

5-PA.16.1 Erie, Pennsylvania

Introduction

The City of Erie is located in Erie County in northwestern Pennsylvania and has a population of approximately 109,000. Currently, both Conrail and NS operate main lines through the city. The NS main line system between Buffalo, New York and Ashtabula, Ohio has run directly

through downtown Erie since 1882. This alignment is shared right-of-way and has numerous highway/rail at-grade crossings with unrestricted access for vehicles and pedestrians. In its Operating Plan submitted with the Application, NS proposes to increase rail traffic along its main line. Meanwhile, if the Board approves the proposed Acquisition, CSX would acquire the Conrail line, which generally has grade-separated right-of-way and is located north of the NS main line.

Description of Existing Environment/Rail Operations

The NS main line runs through Erie for 6.25 miles in a generally west-to-east direction, parallel to the Conrail "Chicago Line" approximately one-half mile to the south. Just east of Downing Avenue, the NS line curves to the southwest and diverges from the Conrail line. The NS main line then becomes aligned with 19th Street, running westward down the center of the street through downtown Erie for approximately 1.25 miles, before rejoining the Conrail line just west of Pittsburgh Avenue.

This main line has long been the cause of local roadway traffic and safety concerns because it runs through a residential/commercial area and shares the right-of-way with two-way vehicular traffic. No barriers exist to prevent vehicle or pedestrian access to the main line track. Current rail traffic averages 13 trains per day, and 20 at-grade crossings intersect the 6.25 mile rail line segment. Nine of these crossings have average daily traffic (ADT) levels greater than 5,000 vehicles. There are also four grade-separated crossings in addition to Interstate 79, which crosses the rail line on the west side of Erie.

Post-Acquisition Changes

NS proposes to operate 25 trains per day on its main line, an increase of 12 trains per day.

Summary of Potential Effects

SEA has concluded that because of the combined effects of existing and proposed rail traffic, the increased NS rail traffic through Erie could cause significant environmental impacts. SEA identified key issues involving pedestrian safety, emergency response, and highway/rail at-grade crossing safety and delay. SEA's analysis indicates that vehicles at five crossings would be delayed and adverse safety effects would occur at three of these crossings.

Pedestrian Safety - The proposed increase in NS trains throughout the residential area of 19th Street and the lack of barriers to prevent public access to the tracks would affect pedestrian safety. For example, 76 residences and 30 industrial/commercial businesses between Peach and Raspberry Streets are located adjacent to the 19th Street line. In addition, eight area schools are located within 1,200 feet of the main line.

Emergency Response - Emergency vehicle response might be impeded by the proposed increase in rail traffic along 19th Street. Two fire stations and one hospital are located south of 19th Street, while two hospitals, two fire stations, and the only police station for the City of Erie are located north of 19th Street.

Highway/Rail At-Grade Crossing Safety and Delay - The doubling of train traffic through residential areas could slow vehicular movement by increasing delays at any of the 20 local highway/rail at-grade crossings, due in part to the 15 mile-per-hour maximum speed through the residential areas. Nine of the crossings have ADTs of more than 5,000 vehicles. Traffic on Pittsburgh Avenue and Ash, Cherry, Raspberry, and Greengarden Streets exceeds 5,000 vehicles per day, and traffic on Parade, Peach, Sassafras, and Liberty Streets exceeds 10,000 vehicles per day. Also, four grade-separated crossings are located along the 6.25-mile rail line segment. Of the 20 at-grade crossings, 6 have gates and flashing lights, while 14 have only flashing lights. Cascade and Cranberry Streets are staffed by 24-hour crossing guards, and Cherry Street is staffed during school hours. SEA determined that five crossings would experience significant adverse effects to vehicle delays and three crossings would have significant adverse safety effects.

While SEA did not quantify conditions along 19th Street, SEA determined that the presence of the tracks results in disruption, delay and the potential for accidents involving roadway traffic along 19th Street. The increase in train traffic would exacerbate these problems.

Preliminary Recommended Mitigation

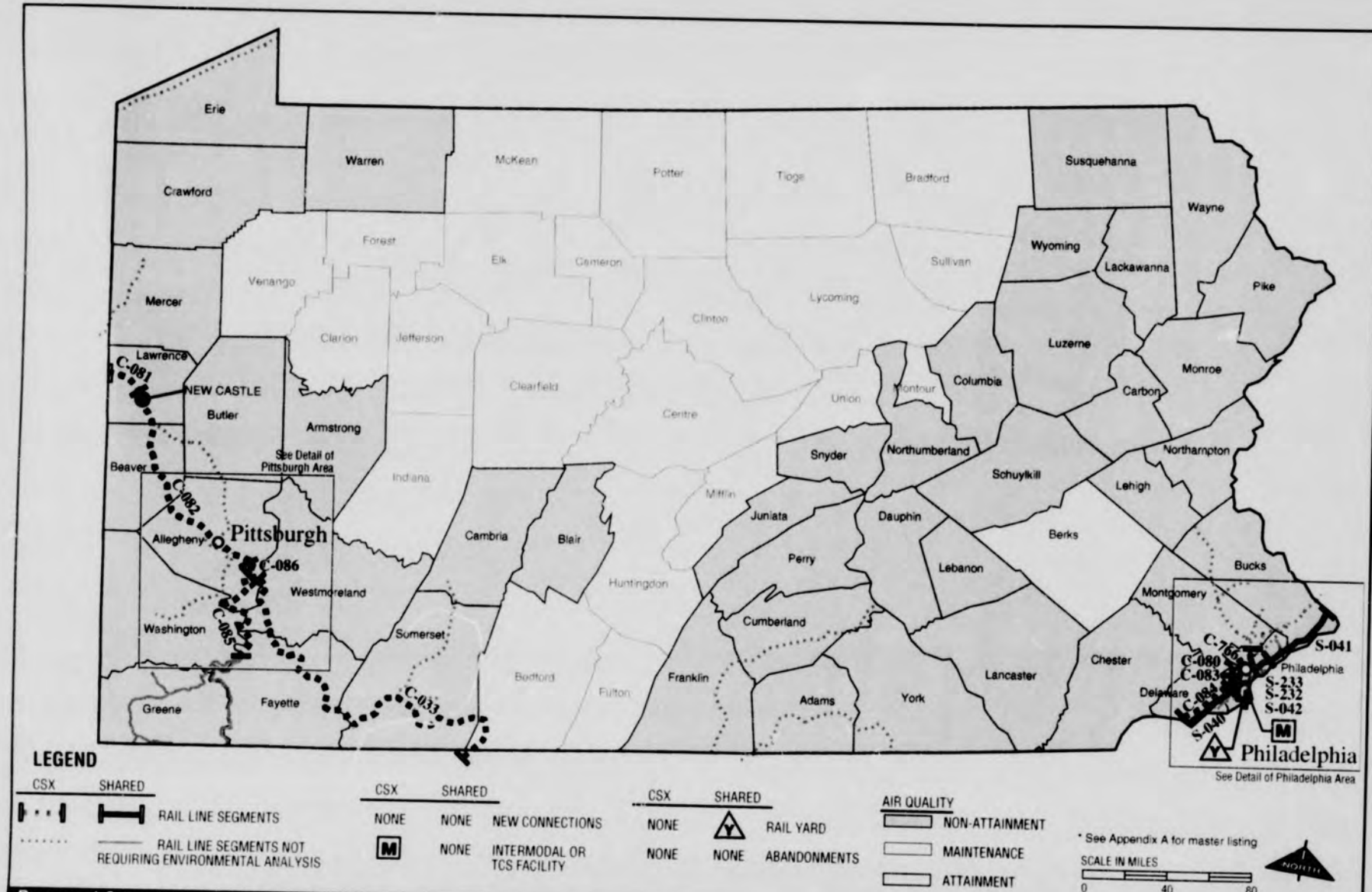
SEA has reviewed a mitigation plan proposed by NS involving the relocation of the NS 19th Street main line in Erie. The proposed mitigation plan is presented in Appendix S. CSX and NS would enter into an agreement whereby CSX would own the Conrail main line but would grant NS exclusive right-of-way. This new alignment would allow NS to relocate current rail traffic from the 19th Street area, except at the eastern and western connection points. The existing Conrail line originally contained four to nine parallel tracks and now contains three, so accommodation of another single line is achievable.

Approximately 52 trains per day operate on the current Conrail main line. If the Board were to approve the Application and if this mitigation were to proceed, NS would run approximately 25 trains per day through the Conrail corridor, for a total of approximately 77 trains per day. The mitigation project has not been fully developed; therefore, it would be premature to quantify the extent of all potential impacts. The Applicants anticipate that this mitigation project would remain within the existing Conrail right-of-way except at the eastern and western connection points, where additional land might be acquired to make connections to the existing NS main line. The area surrounding the current Conrail right-of-way is zoned for general industry. The mitigation project area includes wetlands and three historic resources; the wetlands are located

adjacent to the existing right-of-way in several areas. Prior to proceeding with any construction, NS would acquire the necessary permits.

According to the NS mitigation proposal, the relocated NS main line would require the expansion of four existing highway/rail at-grade crossings along the Conrail main line and a new public at-grade crossing at East Avenue. In all, the proposed relocation of the NS main line to the Conrail right-of-way would reduce the total number of highway/rail at-grade crossings and would consolidate the remaining four crossings into one rail corridor. This consolidation would increase safety while eliminating delays and noise along 19th Street.

It is SEA's preliminary recommendation that: a) CSX shall permit NS to operate on the proposed CSX right-of-way through Erie; b) NS shall reroute its train traffic through Erie from the 19th Street right-of way to the CSX right-of-way; and c) NS shall not increase train traffic by more than two trains per day on the NS right-of-way through Erie until NS completes the necessary agreements and physical improvements to reroute this NS traffic. It is also SEA's preliminary recommendation that CSX and NS shall negotiate a mutually acceptable binding agreement with appropriate parties that address the construction, funding, and rail operations necessary to accomplish the alternate routing plan. It the parties cannot reach a mutually acceptable binding agreement prior to the release of the Final EIS, SEA may recommend that the Board, as a condition of the approval of the Application, direct CSX and NS to construct and/or operate an alternate route for this area or to develop other appropriate mitigation.



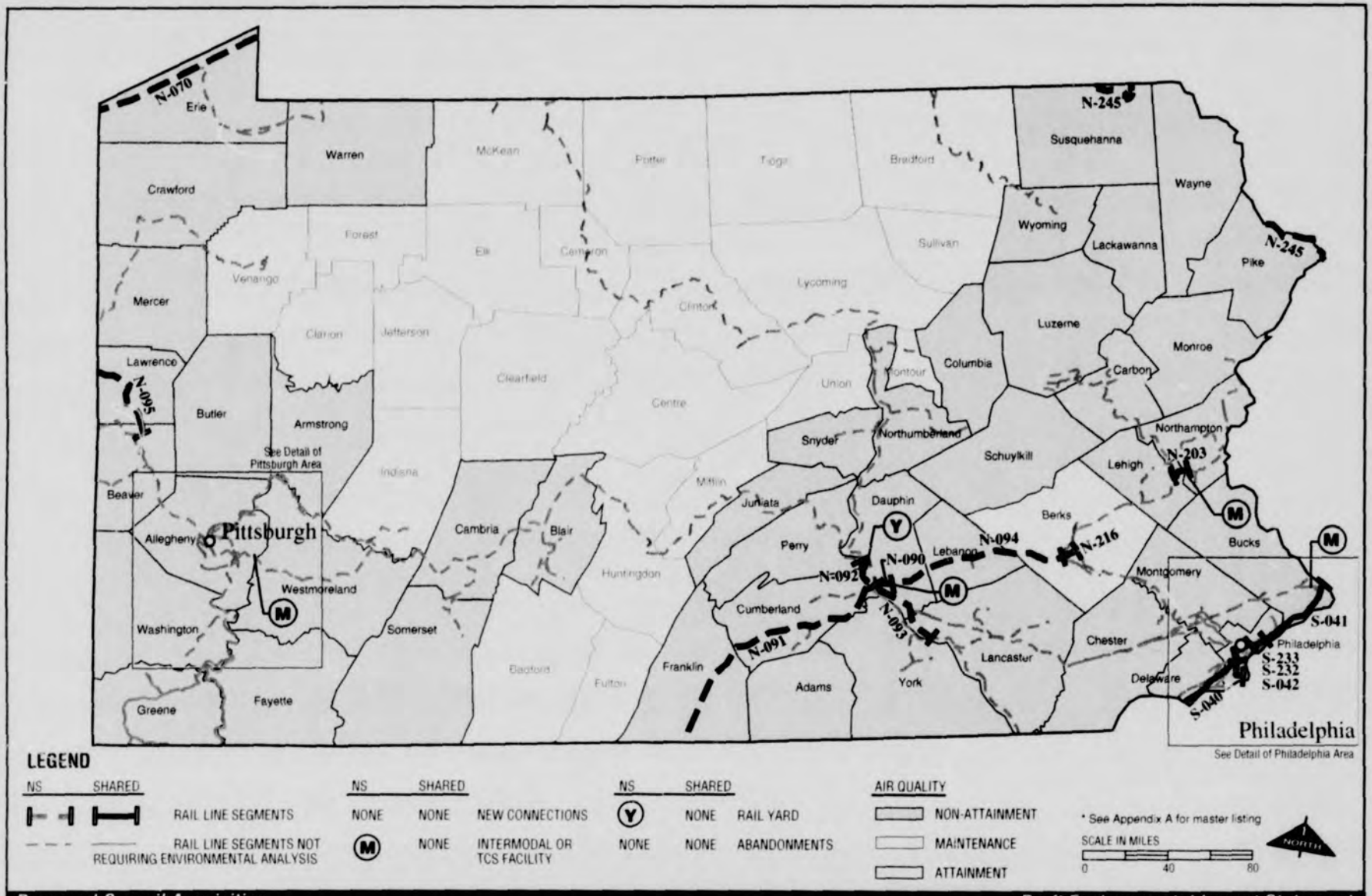
Proposed Conrail Acquisition

Draft Environmental Impact Statement

FIGURE 5-PA-1a

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

PENNSYLVANIA - CSX AND SHARED

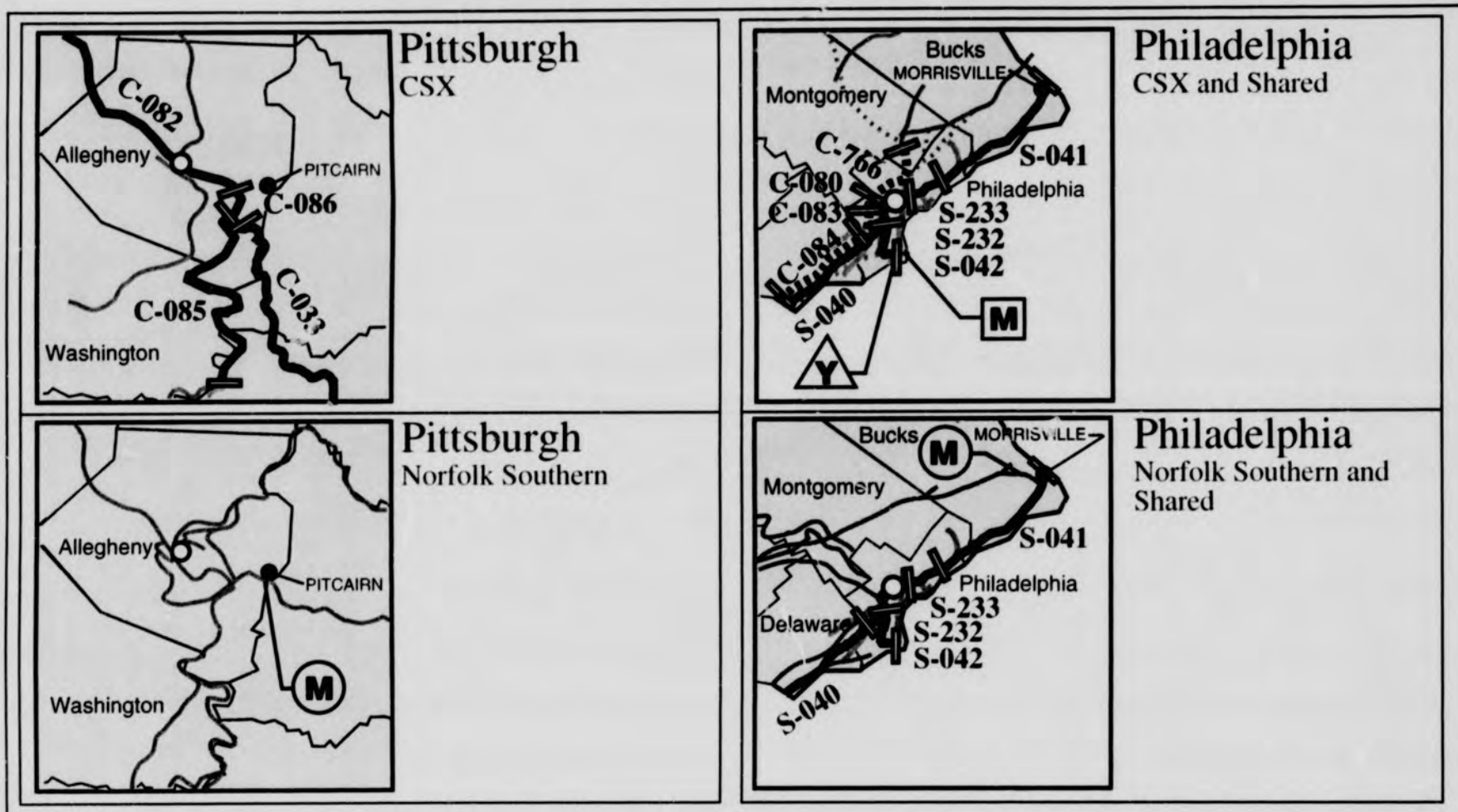


Proposed Conrail Acquisition — *Draft Environmental Impact Statement*

FIGURE 5-PA-1b

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

PENNSYLVANIA - NORFOLK SOUTHERN AND SHARED



Proposed Conrail Acquisition *Draft Environmental Impact Statement*

FIGURE 5-PA-1c

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

PENNSYLVANIA - DETAILS OF PITTSBURGH AND PHILADELPHIA

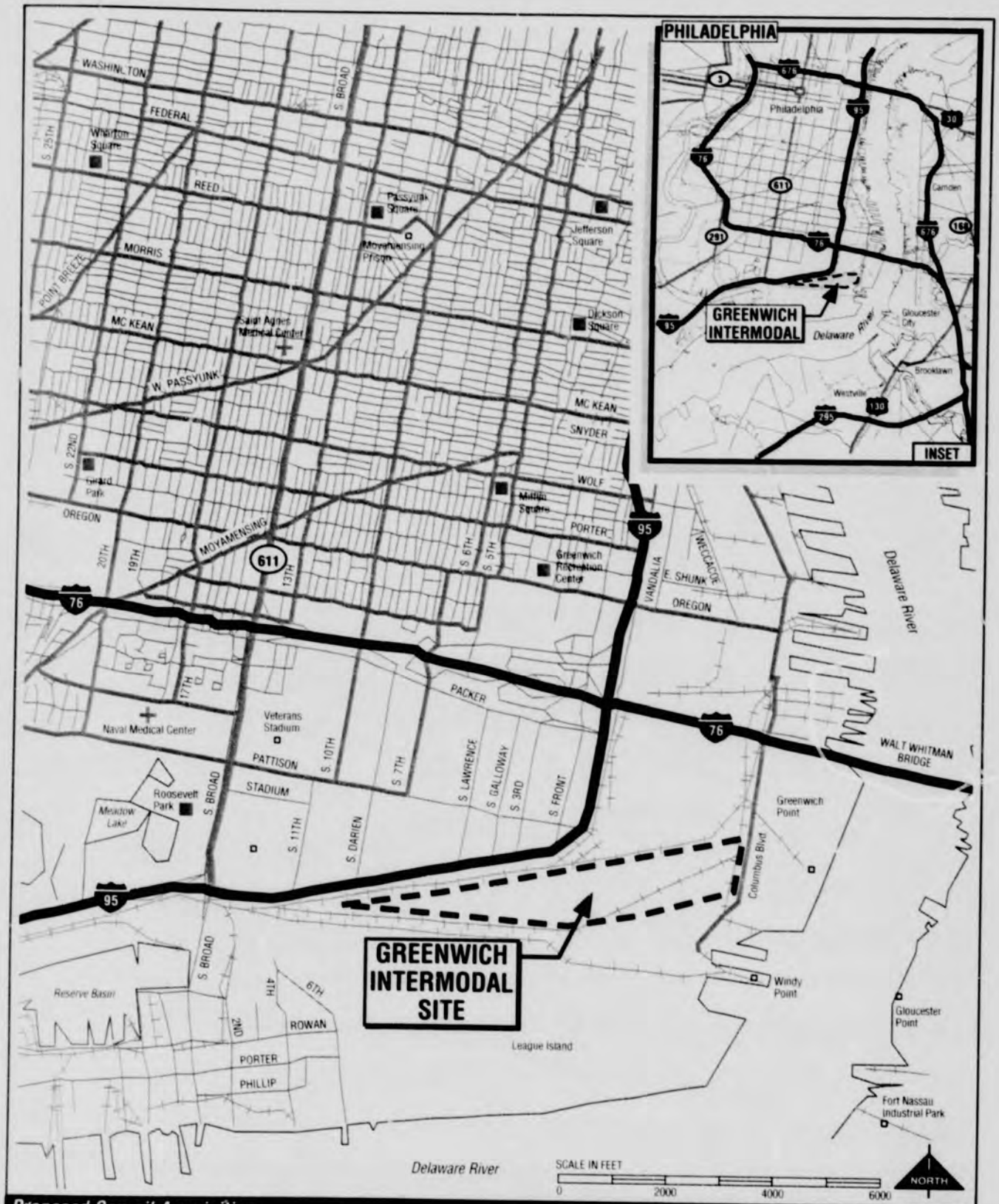
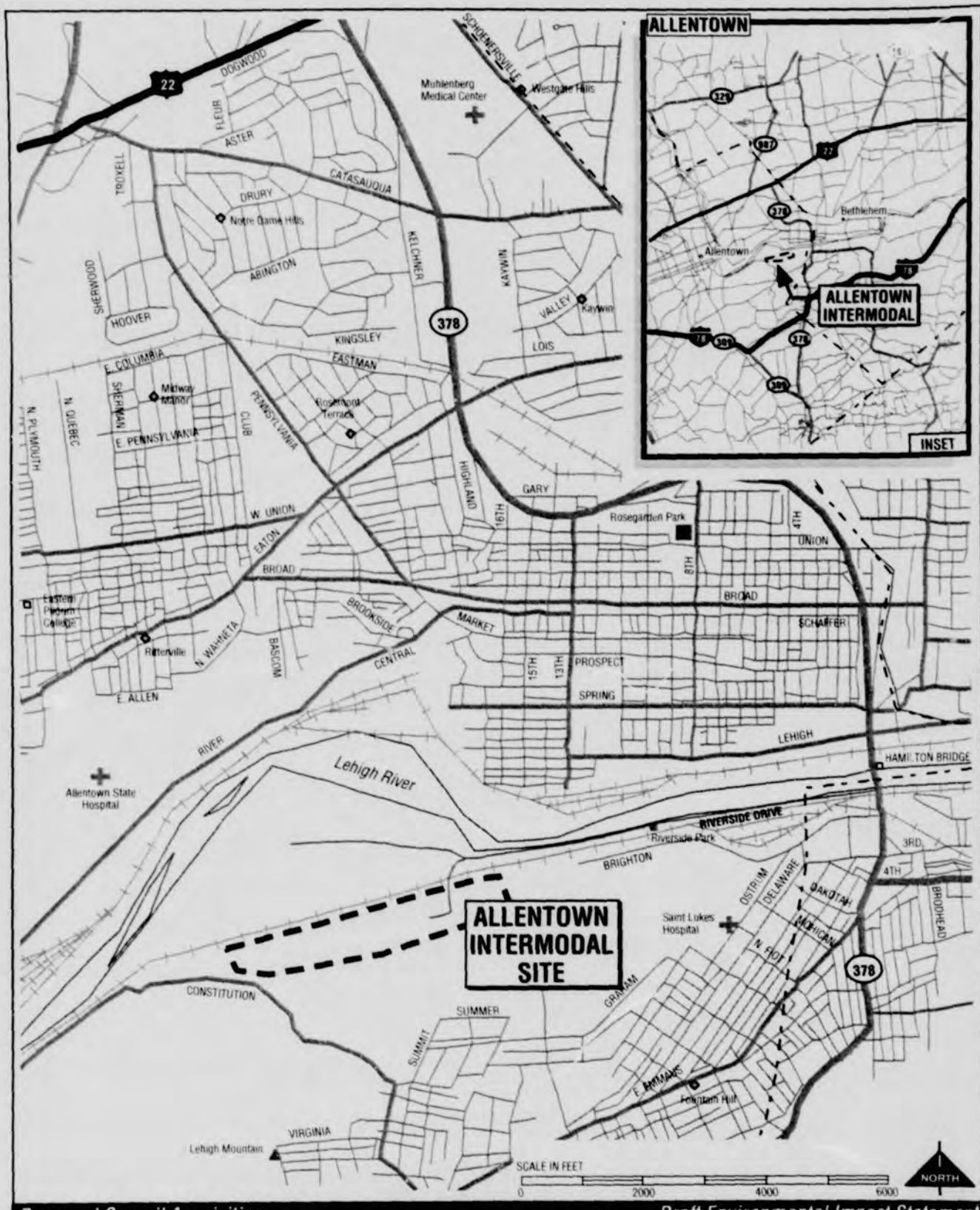


FIGURE 5-PA-2

GREENWICH INTERMODAL SITE, PHILADELPHIA, PENNSYLVANIA

CSX



Proposed Conrail Acquisition — *Draft Environmental Impact Statement*

FIGURE 5-PA-3

ALLENTOWN INTERMODAL SITE, ALLENTOWN, PENNSYLVANIA

NORFOLK SOUTHERN

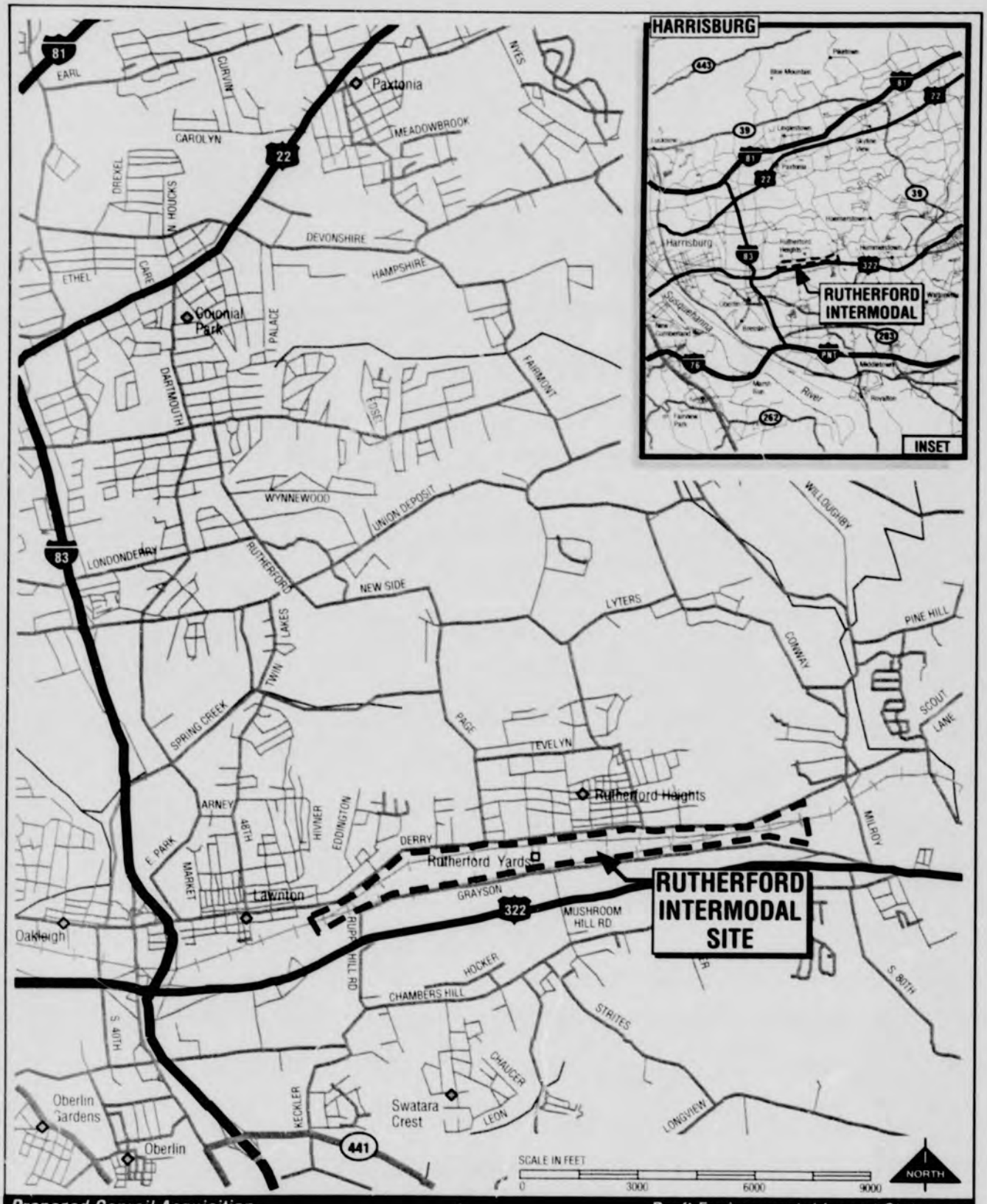
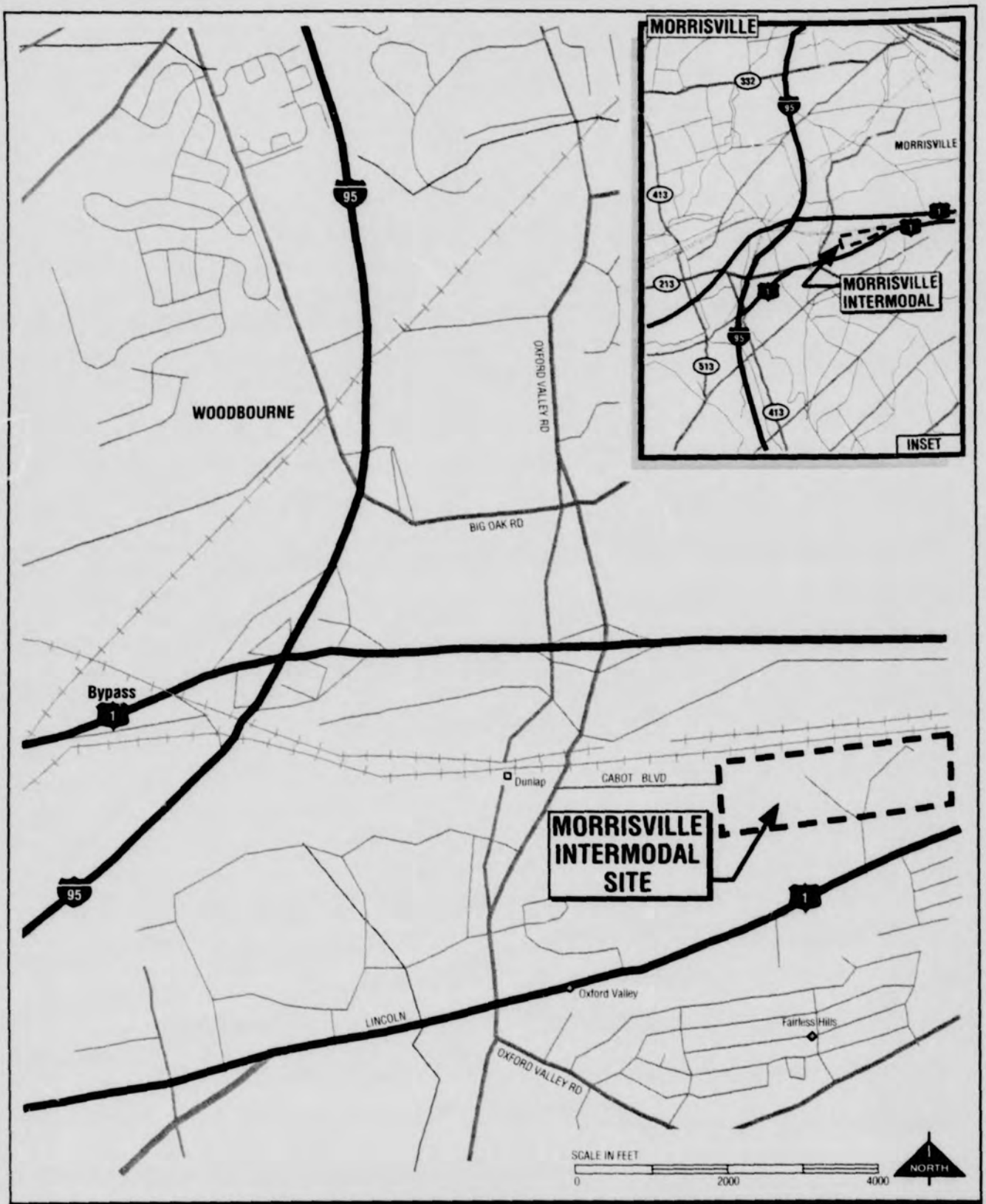


FIGURE 5-PA-4

RUTHERFORD INTERMODAL SITE, HARRISBURG, PENNSYLVANIA

NORFOLK SOUTHERN

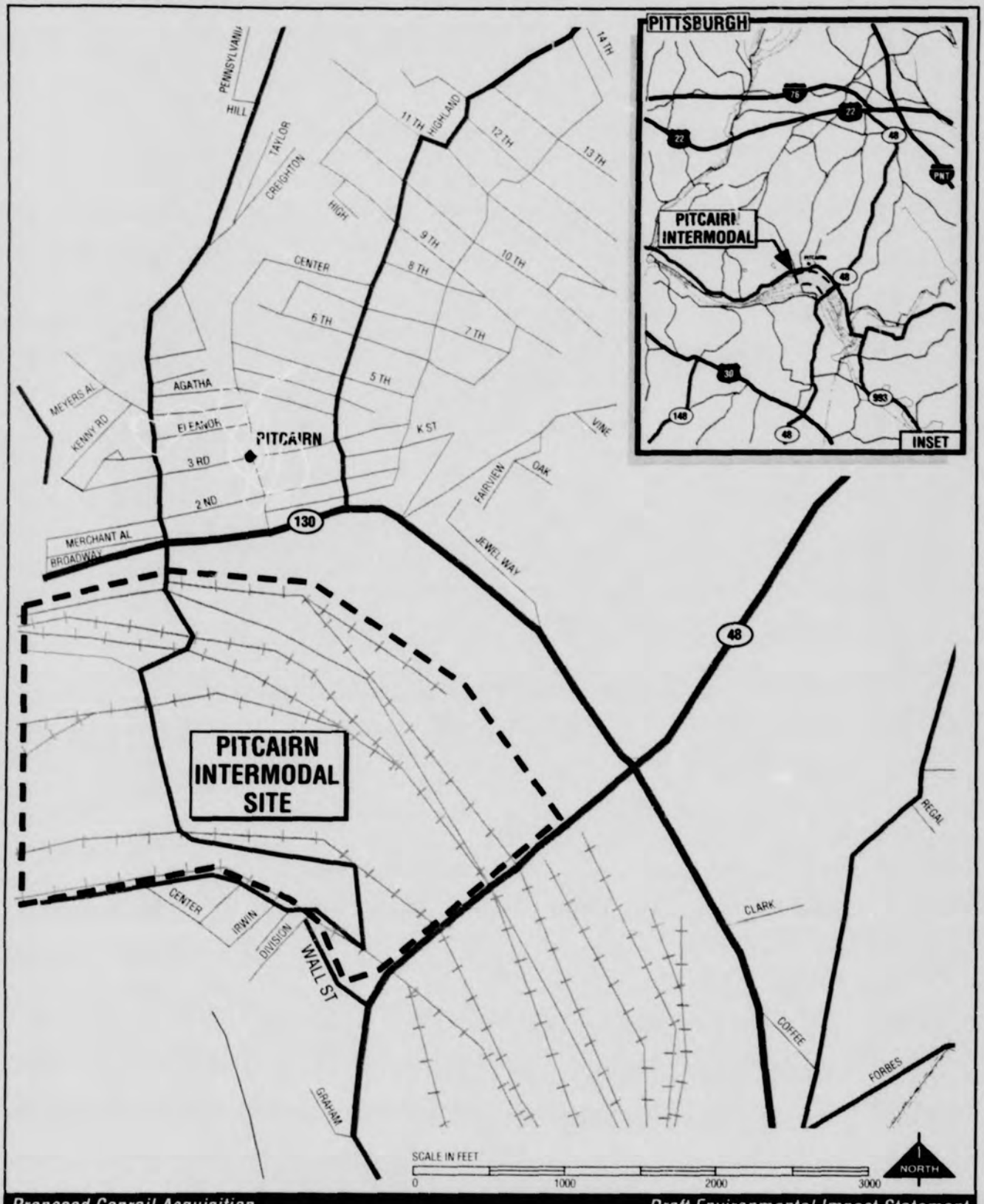


Proposed Conrail Acquisition *Draft Environmental Impact Statement*

FIGURE 5-PA-5

MORRISVILLE INTERMODAL SITE, MORRISVILLE, PENNSYLVANIA

NORFOLK SOUTHERN



Proposed Conrail Acquisition *Draft Environmental Impact Statement*

FIGURE 5-PA-6

PITCAIRN INTERMODAL SITE, PITTSBURGH, PENNSYLVANIA

NORFOLK SOUTHERN

Table 5-PA-6
Pennsylvania
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
ALLEGHENY	C-082	584831X	LENORA ST	Passive	590	2	30	0	28.9	38.3	0.0838	0.0901	0.0063	
ALLEGHENY	C-082	584834T	BROADWAY ST	Gate	480	2	30	1	28.9	38.3	0.0690	0.0738	0.0048	
ALLEGHENY	C-082	584835A	MULBERRY	Gate	480	2	30	0	28.9	38.3	0.0234	0.0261	0.0027	
ALLEGHENY	C-082	584836G	MILL ST	Gate	940	2	30	0	28.9	38.3	0.0275	0.0305	0.0030	
ALLEGHENY	C-082	584837N	MAIN STREET	Gate	720	2	30	0	28.9	38.3	0.0258	0.0287	0.0029	
ALLEGHENY	C-082	584838V	WATT ST	Gate	480	2	30	0	28.9	38.3	0.0234	0.0261	0.0027	
ALLEGHENY	C-082	584839C	THORN ST	Gate	480	2	30	0	28.9	38.3	0.0234	0.0261	0.0027	
ALLEGHENY	C-085	584753T	HARRISON ST	Flasher	590	2	35	0	1.5	10.8	0.0117	0.0281	0.0164	
ALLEGHENY	C-085	584761K	LONG ST	Passive	1,180	2	35	0	1.5	10.8	0.0374	0.0755	0.0381	
ALLEGHENY	C-085	584763Y	LOCUST STREET	Passive	100	1	10	0	1.5	10.8	0.0043	0.0118	0.0075	
ALLEGHENY	C-085	584764F	CHURCH ST	Passive	940	2	10	0	1.5	10.8	0.0300	0.0644	0.0343	
ALLEGHENY	C-085	584767B	PARK ALLEY	Passive	240	1	10	0	1.5	10.8	0.0104	0.0267	0.0163	
ALLEGHENY	C-085	584769P	MILL STREET	Passive	1,410	2	10	0	1.5	10.8	0.0339	0.0703	0.0365	
ALLEGHENY	C-085	584770J	MARKET ST	Passive	1,180	2	10	0	1.5	10.8	0.0321	0.0677	0.0356	
ALLEGHENY	C-085	584771R	PLUM STREET	Passive	1,300	2	10	0	1.5	10.8	0.0331	0.0691	0.0361	
ALLEGHENY	C-085	584772X	STRAWBERRY ALLEY	Passive	1,070	2	10	0	1.5	10.8	0.0312	0.0663	0.0350	
ALLEGHENY	C-085	584774L	BAYARD STREET	Passive	1,070	2	10	0	1.5	10.8	0.0312	0.0663	0.0350	
ALLEGHENY	C-085	584775T	MULBERRY ALLEY	Passive	860	2	10	0	1.5	10.8	0.0292	0.0631	0.0339	
ALLEGHENY	C-085	584786F	KERR STREET	Passive	20	2	35	0	1.5	10.8	0.0101	0.0260	0.0159	
ALLEGHENY	C-085	584791C	MAIN STREET	Passive	230	1	35	0	1.5	10.8	0.0070	0.0186	0.0116	
ALLEGHENY	C-086	584654V	1ST STREET	Flasher	240	1	35	1	30.8	40.2	0.0781	0.0839	0.0058	
ALLEGHENY	C-086	584655C	2ND STREET	Passive	240	1	35	0	30.8	40.2	0.0482	0.0533	0.0051	
ALLEGHENY	C-086	584659E	CLARA STREET	Passive	240	2	30	0	30.8	40.2	0.0731	0.0790	0.0060	
ALLEGHENY	C-086	584664B	3RD STREET	Passive	590	2	35	0	30.8	40.2	0.0883	0.0942	0.0059	
ALLEGHENY	C-086	584667W	6TH STREET	Gate	480	2	35	0	30.8	40.2	0.0247	0.0274	0.0026	
ALLEGHENY	C-086	584668D	7TH STREET	Gate	820	2	35	0	30.8	40.2	0.0281	0.0309	0.0029	
ALLEGHENY	C-086	584669K	8TH STREET	Gate	480	2	35	0	30.8	40.2	0.0247	0.0274	0.0026	
ALLEGHENY	C-086	584671L	11TH STREET	Flasher	590	2	35	1	30.8	40.2	0.1038	0.1114	0.0076	
ALLEGHENY	C-086	584674G	LOCUST STREET	Gate	100	2	25	0	30.8	40.2	0.0167	0.0186	0.0019	
ALLEGHENY	C-086	584679R	HAMILTON STREET	Passive	2,360	2	25	0	30.8	40.2	0.1056	0.1110	0.0054	
ALLEGHENY	C-086	584681S	RIVER ST	Gate	250	2	25	1	30.8	40.2	0.0648	0.0690	0.0042	
BEAVER	C-082	584865S	14TH STREET	Gate	7,144	2	40	1	28.9	38.3	0.1038	0.1110	0.0071	
BEAVER	C-082	584879A	6TH AVE	Flasher	100	1	40	0	28.9	38.3	0.0198	0.0224	0.0026	
CUMBERLAND	N-091	592199A	TENTH ST	Gate	7,700	2	40	0	11.1	19.6	0.0318	0.0387	0.0069	
CUMBERLAND	N-091	592200S	18TH ST	Gate	7,501	2	40	0	11.1	19.6	0.0316	0.0385	0.0069	
CUMBERLAND	N-091	592204U	SLATE HILL	Flasher	7,123	2	40	0	11.1	19.6	0.0568	0.0669	0.0101	
CUMBERLAND	N-091	592207P	ROSSMOYNE ROAD	Gate	2,356	2	40	0	11.1	19.6	0.0235	0.0291	0.0056	
CUMBERLAND	N-091	592272V	WINDING HILL RD	Gate	384	2	40	0	11.1	19.6	0.0149	0.0188	0.0039	
CUMBERLAND	N-091	592279T	MILL	Gate	580	2	40	0	11.1	19.6	0.0166	0.0208	0.0043	

Table 5-PA-6
Pennsylvania
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
CUMBERLAND	N-091	592288S	WILLIAMS GROVE	Gate	496	2	40	0	11.1	19.6	0.0159	0.0200	0.0041	
CUMBERLAND	N-091	592289Y	SHEAFFER	Passive	70	2	40	0	11.1	19.6	0.0378	0.0475	0.0097	
CUMBERLAND	N-091	592290T	YORK ROAD/SR 74	Gate	3,684	2	40	2	11.1	19.6	0.1218	0.1376	0.0158	a
CUMBERLAND	N-091	592292G	CREEK ROAD	Gate	770	2	40	0	11.1	19.6	0.0178	0.0223	0.0045	
CUMBERLAND	N-091	592293N	LEIDIGS DR	Gate	350	2	50	0	11.1	19.6	0.0149	0.0189	0.0039	
CUMBERLAND	N-091	592295C	CRISWALL	Passive	1,070	2	40	1	11.1	19.6	0.1663	0.1891	0.0229	0.0176
CUMBERLAND	N-091	592296J	RACE	Flasher	1,070	2	35	0	11.1	19.6	0.0335	0.0416	0.0081	
CUMBERLAND	N-091	592298X	TANGER	Passive	50	2	35	0	11.1	19.6	0.0333	0.0422	0.0090	
CUMBERLAND	N-091	592309H	CHESTNUT	Flasher	720	2	40	1	11.1	19.6	0.0815	0.0950	0.0135	
CUMBERLAND	N-091	592311J	MT VIEW	Gate	20	2	40	0	11.1	19.6	0.0068	0.0087	0.0019	
CUMBERLAND	N-091	592313X	PINE ROAD	Gate	1,154	2	40	0	11.1	19.6	0.0176	0.0221	0.0045	
CUMBERLAND	N-091	592317A	STUARTS	Passive	110	2	40	0	11.1	19.6	0.0435	0.0541	0.0106	
CUMBERLAND	N-091	592319N	MOORS MILL ROAD	Gate	250	2	40	0	11.1	19.6	0.0118	0.0150	0.0032	
CUMBERLAND	N-091	592320H	MILL	Passive	190	2	40	1	11.1	19.6	0.1235	0.1441	0.0205	0.0096
CUMBERLAND	N-091	592321P	SHEAFFER	Passive	70	2	40	0	11.1	19.6	0.0236	0.0306	0.0070	
CUMBERLAND	N-091	592524U	HUNTSDALE	Gate	256	2	40	0	11.1	19.6	0.0136	0.0172	0.0036	
CUMBERLAND	N-091	592526H	PINE GROVE RD	Gate	1,270	2	40	0	11.1	19.6	0.0206	0.0256	0.0051	
CUMBERLAND	N-091	592528W	LONGSDORF ROAD	Gate	218	2	40	0	11.1	19.6	0.0114	0.0145	0.0031	
CUMBERLAND	N-091	592532L	HAYS GROVE	Gate	128	2	40	0	11.1	19.6	0.0113	0.0144	0.0031	
CUMBERLAND	N-091	592533T	QUARRY HILL	Passive	20	2	40	0	11.1	19.6	0.0157	0.0207	0.0050	
CUMBERLAND	N-091	592538C	HIGH MOUNTAIN	Flasher	240	2	40	0	11.1	19.6	0.0206	0.0264	0.0058	
CUMBERLAND	N-091	592540D	FURNACE HOLLOW RD	Gate	256	2	40	0	11.1	19.6	0.0119	0.0151	0.0032	
CUMBERLAND	N-091	592541K	HAMMOND	Gate	256	2	40	0	11.1	19.6	0.0136	0.0172	0.0036	
CUMBERLAND	N-091	592542S	KELSO	Flasher	110	2	40	0	11.1	19.6	0.0153	0.0198	0.0045	
CUMBERLAND	N-091	592544F	LEES CROSS ROADS	Gate	641	2	40	0	11.1	19.6	0.0167	0.0210	0.0043	
CUMBERLAND	N-091	592546U	REESE/GOODHEART	Passive	50	2	40	0	11.1	19.6	0.0360	0.0455	0.0095	
ERIE	N-070	471859A	GULF ROAD	Gate	650	2	50	0	13.0	25.1	0.0155	0.0202	0.0047	
ERIE	N-070	471861B	BORT ROAD	Flasher	100	2	50	0	13.0	25.1	0.0133	0.0180	0.0047	
ERIE	N-070	471863P	REMINGTON ROAD	Gate	160	2	60	0	13.0	25.1	0.0107	0.0141	0.0034	
ERIE	N-070	471867S	LOOMIS STREET	Gate	540	2	60	0	13.0	25.1	0.0148	0.0193	0.0046	
ERIE	N-070	471868Y	WASHINGTON STREET	Gate	740	2	60	0	13.0	25.1	0.0160	0.0209	0.0049	
ERIE	N-070	471869F	SMEDLEY STREET	Gate	540	2	60	0	13.0	25.1	0.0148	0.0193	0.0046	
ERIE	N-070	471872N	CEMETERY ROAD	Gate	140	2	60	1	13.0	25.1	0.0454	0.0514	0.0060	
ERIE	N-070	471874C	WILLIAMS ROAD	Gate	1,043	2	60	0	13.0	25.1	0.0175	0.0228	0.0052	
ERIE	N-070	471875J	SPENCER ROAD	Gate	180	2	60	0	13.0	25.1	0.0110	0.0146	0.0035	
ERIE	N-070	471876R	STATION ROAD	Gate	686	2	60	0	13.0	25.1	0.0157	0.0205	0.0048	
ERIE	N-070	471877X	KING ROAD	Gate	220	2	60	0	13.0	25.1	0.0116	0.0154	0.0037	
ERIE	N-070	471878E	DAVIDSON ROAD	Flasher	220	2	60	0	13.0	25.1	0.0177	0.0237	0.0060	
ERIE	N-070	471881M	WALBRIDGE ROAD	Gate	3,180	2	60	0	13.0	25.1	0.0232	0.0297	0.0065	

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County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
ERIE	N-070	471886W	DOWNING AVENUE	Gate	1,220	2	60	0	13.0	25.1	0.0182	0.0237	0.0054	
ERIE	N-070	471893G	ASH STREET	Flasher	5,290	2	35	0	13.0	25.1	0.0486	0.0599	0.0113	
ERIE	N-070	471894N	PARADE STREET	Gate	15,000	4	35	0	13.0	25.1	0.0408	0.0501	0.0092	
ERIE	N-070	471896C	GERMAN STREET	Flasher	740	2	35	0	13.0	25.1	0.0269	0.0351	0.0082	
ERIE	N-070	471898R	HOLLAND STREET	Flasher	4,299	2	35	0	13.0	25.1	0.0460	0.0570	0.0111	
ERIE	N-070	471901W	PEACH STREET	Gate	11,110	4	15	2	13.0	25.1	0.1535	0.1768	0.0233	a
ERIE	N-070	471902D	SASSAFRAS STREET	Gate	11,110	2	15	1	13.0	25.1	0.0828	0.0971	0.0143	
ERIE	N-070	471903K	MYRTLE STREET	Flasher	740	2	15	0	13.0	25.1	0.0269	0.0351	0.0082	
ERIE	N-070	471904S	CHESTNUT STREET	Flasher	1,380	2	15	0	13.0	25.1	0.0329	0.0422	0.0094	
ERIE	N-070	471905Y	WALNUT STREET	Gate	320	2	15	0	13.0	25.1	0.0129	0.0169	0.0041	
ERIE	N-070	471906F	CHERRY STREET	Flasher	9,220	2	15	3	13.0	25.1	0.2738	0.3136	0.0398	0.0457
ERIE	N-070	471907M	POPLAR STREET	Flasher	370	2	15	1	13.0	25.1	0.0660	0.0785	0.0125	
ERIE	N-070	471908U	LIBERTY STREET	Gate	18,284	4	15	0	13.0	25.1	0.0425	0.0519	0.0094	
ERIE	N-070	471909B	PLUM STREET	Flasher	580	2	15	0	13.0	25.1	0.0248	0.0326	0.0078	
ERIE	N-070	471910V	CASCADE STREET	Flasher	1,580	2	15	1	13.0	25.1	0.0895	0.1068	0.0173	
ERIE	N-070	471911C	RASPBERRY STREET	Flasher	5,400	2	15	2	13.0	25.1	0.1826	0.2120	0.0294	0.0372
ERIE	N-070	471912J	CRANBERRY STREET	Flasher	840	2	15	1	13.0	25.1	0.0782	0.0935	0.0152	
ERIE	N-070	471913R	GREEN GARDEN ROAD	Gate	7,940	2	60	1	13.0	25.1	0.0787	0.0923	0.0136	
ERIE	N-070	471915E	PITTSBURG ROAD	Gate	7,004	2	60	0	13.0	25.1	0.0280	0.0354	0.0074	
ERIE	N-070	471920B	TOWNLINE ROAD	Gate	580	2	60	0	13.0	25.1	0.0151	0.0197	0.0046	
ERIE	N-070	471921H	MANCHESTER ROAD	Gate	1,060	2	60	1	13.0	25.1	0.0585	0.0680	0.0095	
ERIE	N-070	471922P	OLD DUTCH ROAD	Flasher	450	2	60	1	13.0	25.1	0.0687	0.0818	0.0131	
ERIE	N-070	471923W	EATON ROAD	Flasher	220	2	60	0	13.0	25.1	0.0177	0.0237	0.0060	
ERIE	N-070	471925K	BLAIR ROAD	Gate	80	2	60	1	13.0	25.1	0.0428	0.0480	0.0052	
ERIE	N-070	471926S	FAIRPLAIN ROAD	Passive	30	2	60	0	13.0	25.1	0.0349	0.0457	0.0108	
ERIE	N-070	471930G	HAGERTY ROAD	Gate	320	2	60	0	13.0	25.1	0.0129	0.0169	0.0041	
ERIE	N-070	471931N	MECHANIC ROAD	Gate	320	2	60	0	13.0	25.1	0.0129	0.0169	0.0041	
ERIE	N-070	471937E	TANNERY ROAD	Flasher	80	2	60	0	13.0	25.1	0.0122	0.0166	0.0044	
ERIE	N-070	471939T	MIDDLE RD/TOWLINE	Flasher	80	2	60	0	13.0	25.1	0.0122	0.0166	0.0044	
ERIE	N-070	471940M	LUCAS ROAD	Passive	100	1	60	2	13.0	25.1	0.1102	0.1266	0.0164	0.0173
ERIE	N-070	471941U	MILLS RD/HAPPY VALLEY RD	Flasher	160	2	60	0	13.0	25.1	0.0158	0.0212	0.0055	
ERIE	N-070	471942B	DEPOT ROAD	Flasher	629	2	60	0	13.0	25.1	0.0255	0.0334	0.0079	
ERIE	N-070	471943H	SCOTT ROAD	Passive	80	2	60	0	13.0	25.1	0.0459	0.0586	0.0127	
ERIE	N-070	471944P	NASH ROAD	Gate	100	2	60	0	13.0	25.1	0.0094	0.0125	0.0031	
ERIE	N-070	471948S	CRAYTON ROAD	Passive	343	2	60	0	13.0	25.1	0.0656	0.0801	0.0145	
ERIE	N-070	471949Y	RUDO ROAD	Passive	80	2	60	0	13.0	25.1	0.0289	0.0384	0.0095	
FAYETTE	C-085	584816V	MILLER ST	Passive	330	2	10	0	1.5	10.8	0.0216	0.0500	0.0283	
FAYETTE	C-085	584817C	MORGAN ST	Flasher	540	2	10	0	1.5	10.8	0.0094	0.0233	0.0139	

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									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
FRANKLIN	N-091	534606U	CRESSLER	Passive	100	2	30	0	11.1	19.6	0.0404	0.0505	0.0102	
FRANKLIN	N-091	534607B	POSSUM HOLLOW RD	Passive	160	2	30	0	11.1	19.6	0.0459	0.0568	0.0109	
FRANKLIN	N-091	535145R	KRINER ROAD	Flasher	4,890	2	30	0	11.1	19.6	0.0453	0.0548	0.0094	
FRANKLIN	N-091	535146X	GUILFRD SPRNGS RD	Passive	770	2	30	2	11.1	19.6	0.2358	0.2683	0.0324	0.0143
FRANKLIN	N-091	535148L	LIGHT HOUSE RD.	Passive	160	2	30	0	11.1	19.6	0.0443	0.0550	0.0107	
FRANKLIN	N-091	535150[illegible]	OVERCASH ROAD	Passive	220	1	30	0	11.1	19.6	0.0282	0.0362	0.0080	
FRANKLIN	N-091	53515[illegible]J	ALLEMAN	Passive	390	1	30	1	11.1	19.6	0.0933	0.1095	0.0162	
FRANKLIN	N-091	535152B	T452	Passive	100	1	30	0	11.1	19.6	0.0220	0.0286	0.0066	
FRANKLIN	N-091	535153H	LRA230	Flasher	2,173	2	30	1	11.1	19.6	0.0921	0.1073	0.0151	
FRANKLIN	N-091	535154P	COLORADO	Flasher	450	2	30	0	11.1	19.6	0.0214	0.0273	0.0059	
FRANKLIN	N-091	535159Y	MASON ROAD	Passive	220	2	30	0	11.1	19.6	0.0482	0.0594	0.0112	
FRANKLIN	N-091	535162G	MILNOR ROAD	Passive	427	2	30	0	11.1	19.6	0.0581	0.0702	0.0121	
FRANKLIN	N-091	535163N	HAYES ROAD	Passive	160	2	30	4	11.1	19.6	0.3221	0.3676	0.0455	0.0083
FRANKLIN	N-091	535178D	MASON DIXON RD	Flasher	1,345	2	30	0	11.1	19.6	0.0313	0.0390	0.0078	
LAWRENCE	C-082	145826R	FOURTH ST	Gate	1,770	2	60	0	28.9	38.3	0.0280	0.0310	0.0030	
LAWRENCE	C-082	145830F	ROCK POINT XING	Passive	110	1	60	0	28.9	38.3	0.0263	0.0299	0.0036	
LAWRENCE	C-082	145833B	JOHNSON XING	Passive	30	2	60	0	28.9	38.3	0.0314	0.0355	0.0041	
LAWRENCE	C-082	145835P	EDGEMORE XING	Flasher	580	2	60	0	28.9	38.3	0.0402	0.0445	0.0043	
LAWRENCE	N-082	503738U	MONTGOMERY	Gate	6,400	2	40	0	11.7	23.8	0.0299	0.0384	0.0084	

a Improvements in accident rate with four-quadrant gates or roadway median not quantifiable.

Table 5-PA-9
Pennsylvania
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

						Pre Acquisition								*Post Acquisition*								
County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Beaver	C-082	584865S	14TH ST.	2	7,144	28.9	35	6,000	351	17	2.92	17.19	C	38.3	35	6,200	477	18	2.99	24.01	C	
Berks	N-094	592237G	COLUMBIA AVE.	2	7,106	42.4	40	5,600	437	15	2.49	18.38	C	49.1	40	5,000	465	14	2.29	17.96	C	
Cumberland	N-091	592204U	SLATE HILL	2	7,123	11.1	35	5,600	127	17	2.76	5.92	B	19.6	35	5,000	206	15	2.53	8.77	B	
Cumberland	N-091	592199A	TENTH ST	2	7,700	11.1	35	5,600	138	18	2.80	6.01	B	19.6	35	5,000	223	16	2.57	8.91	B	
Cumberland	N-091	592200S	18TH ST	2	7,501	11.1	35	4,869	120	16	2.50	4.82	A	19.6	35	5,000	217	16	2.55	8.86	B	
Dauphin	N-094	592369S	DERRY RD	2	5,500	42.4	40	5,600	339	12	2.39	17.62	C	49.1	40	5,000	360	11	2.19	17.22	C	
Delaware	C-084	140641S	MAIN ST.	2	6,855	22.9	40	6,000	240	15	2.61	10.96	B	26.4	40	6,200	284	16	2.67	13.30	B	
Delaware	C-084	140646B	OAK LANE	2	14,510	22.9	40	6,000	509	32	3.27	13.77	B	26.4	40	6,200	602	33	3.36	16.70	C	
Delaware	C-084	140647H	ASHLAND AVE	2	5,820	22.9	40	6,000	204	13	2.54	10.67	B	26.4	40	6,200	241	13	2.60	12.94	B	
Delaware	C-084	140649W	SOUTH AVE	2	14,995	22.9	40	6,000	526	33	3.33	14.00	B	26.4	40	6,200	622	34	3.41	16.98	C	
Delaware	C-084	140650R	AMOSLAND AVE	2	11,425	22.9	40	6,000	401	25	2.97	12.48	B	26.4	40	6,200	474	26	3.04	15.14	C	
Delaware	C-084	140652E	SWARTHMORE AVE	2	23,458	22.9	40	6,000	822	52	4.67	19.65	C	26.4	40	6,200	973	53	4.79	23.83	C	
Delaware	C-084	140654T	FAIRVIEW RD	2	9,682	22.9	40	6,000	339	21	2.82	11.85	B	26.4	40	6,200	401	22	2.89	14.38	B	
Delaware	C-084	140670C	MEETINGHOUSE RD	2	7,862	22.9	40	6,000	276	17	2.68	11.26	B	26.4	40	6,200	326	18	2.75	13.66	B	
Delaware	C-084	140672R	NAAMANS RD	2	6,695	22.9	40	6,000	235	15	2.60	10.92	B	26.4	40	6,200	278	15	2.66	13.24	B	
Erie	N-070	471893G	ASH ST.	2	5,290	13.0	35	4,869	99	11	2.36	5.32	B	25.2	35	5,000	197	11	2.41	10.74	B	
Erie	N-070	471894N	PARADE ST.	4	15,000	13.0	35	4,869	282	16	2.50	5.64	B	25.2	35	5,000	557	16	2.55	11.39	B	
Erie	N-070	471901W	PEACH ST.	4	11,110	13.0	15	4,869	420	23	4.79	21.71	C	25.2	15	5,000	834	24	4.90	44.11	E	E (c)
Erie	N-070	471902D	SASSAFRAS ST.	2	11,110	13.0	15	4,869	420	47	5.59	25.34	D	25.2	15	5,000	834	48	5.72	51.47	E	E (c)
Erie	N-070	471906F	CHERRY ST.	2	9,220	13.0	15	4,869	349	39	5.29	23.98	C	25.2	15	5,000	692	40	5.41	48.70	E	E (c)
Erie	N-070	471908U	LIBERTY ST.	4	18,284	13.0	15	4,869	691	38	5.27	23.92	C	25.2	15	5,000	1372	39	5.40	48.60	E	E (c)
Erie	N-070	471911C	RASPBERRY ST.	2	5,400	13.0	15	4,869	204	23	4.77	21.63	C	25.2	15	5,000	405	23	4.88	43.94	E	E (c)
Erie	N-070	471913R	GREEN GARDEN RD	2	7,940	13.0	50	4,869	115	13	1.96	3.40	A	25.2	50	5,000	227	13	1.99	6.84	B	
Erie	N-070	471915E	PITTSBURG RD	2	7,004	13.0	50	4,869	102	11	1.91	3.32	A	25.2	50	5,000	201	11	1.94	6.67	B	
Lawrence	C-082	503738U	MONTGOMERY	2	6,400	28.9	35	5,600	298	15	2.71	15.11	C	38.3	35	5,000	361	14	2.48	16.81	C	
Lebanon	N-094	592338T	FRONT ST-LINCOLN	2	5,760	42.4	25	5,600	517	18	3.50	37.64	D	49.1	25	5,000	545	16	3.19	36.13	D	
Lebanon	N-094	592341B	SEVENTH ST.	2	5,520	42.4	25	5,600	486	17	3.47	37.31	D	49.1	25	5,000	512	15	3.16	35.81	D	
Lebanon	N-094	592365P	RAILROAD ST.	2	7,747	42.4	40	5,600	446	15	2.50	18.45	C	49.1	40	5,000	475	14	2.29	18.03	C	
Westmoreland	C-033	145480R	MAIN ST.	2	9,195	27.7	30	6,000	490	25	3.50	22.37	C	32.8	30	6,200	597	26	3.59	27.96	D	D (b)

(b) Recommend consultation between railroad and community.

(c) Recommend consultation between railroad and community regarding NS mitigation plan (Appendix S)

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5-RI
RHODE ISLAND

This section provides background information for resources in Rhode Island. Tables list the proposed Conrail Acquisition-related activities in Rhode Island that meet or exceed the Board's thresholds environmental analysis. This section also presents the various technical analyses conducted for these activities in Rhode Island. The analyses highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-RI.1 RHODE ISLAND SETTING

Rhode Island is a New England state. Principal products of Rhode Island include goods such as metals, textiles, rubber goods, chemicals, dairy products, eggs, and poultry. Railroads play a limited role in transportation in Rhode Island.

Transportation Facilities

Rhode Island's major interstate highway is I-95, a north/south facility. This interstate serves cities such as Providence and Warwick. Rhode Island's major port is the Port of Providence.

Railroad Facilities

There are approximately 81 route miles in Rhode Island. No Class I Railroads serve the state.

Intercity Passenger and Commuter Rail Services

Amtrak serves Rhode Island via its Northeast Corridor, serving the cities of Providence, Westerly and Kingston. Massachusetts Bay Transportation Authority (MBTA) operates eight commuters trains between Providence and Boston, Massachusetts on Amtrak's Northeast Corridor.

5-RI.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN RHODE ISLAND

In the Operating Plans submitted to the Board, the Applicants indicate that no CSX or NS rail line segments, rail yards, or intermodal facilities in Rhode Island would experience increased

traffic or activity and that there are no new connections or proposed abandonments that would meet or exceed the Boards's thresholds for environmental analysis. CSX and NS anticipate that due to predicted truck-to-rail diversions, Rhode Island would experience a benefit in the areas of emissions, noise, and safety. Figure 5-RI-1 at the end of this state discussion shows the Northeast Corridor.

5-RI.3 RHODE ISLAND SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-related activities in Rhode Island that meet the Board's thresholds for environmental analysis and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Safety (Freight Rail Operations; Passenger Rail Operations; Highway/Rail At-Grade Crossings; Hazardous Material Handling).
- Transportation (Highway/Rail At-Grade Crossing Delay; Roadway Effects from Rail Facility Modification; Navigation)
- Energy.
- Air Quality.
- Noise.
- Cultural Resources.
- Hazardous Materials and Waste Sites.
- Natural Resources.
- Land Use/Socioeconomics.
- Environmental Justice.

Details of the environmental analysis for Rhode Island follow.

5-RI.4 RHODE ISLAND TRANSPORTATION: PASSENGER RAIL SERVICE

In Rhode Island, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-relatedeffects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Amtrak provides passenger rail service to the cities of Providence, Westerly and Kingston on the Amtrak Northeast Corridor. However, there would be no increase in freight service on that line as a result of the proposed Conrail Acquisition. There are no Conrail, CSX, or NS lines used for intercity passenger rail service that meet the threshold for analysis. Section 4.7.1, "Intercity Passenger Rail Service," discusses intercity passenger rail service effects.

Commuter Rail

SEA's evaluation included an assessment of the projected level of train traffic and the capacity of the railroad facilities including the number of main tracks, maximum authorized speed for freight and passenger trains, and the type of train control, signaling and train dispatching system utilized. SEA also examined the frequency of interlockings, which permit faster trains to move around slower trains. SEA utilized experienced railroad operating personnel to assess each line segment using timetables, track charts, existing and proposed train levels, professional experience and personal familiarity with the rail facilities.

The Massachusetts Bay Transportation Authority (MBTA) provides commuter service from Boston's South Station to Providence, Rhode Island, utilizing Amtrak's Northeast Corridor. Conrail has no freight operations in the state of Rhode Island.

Future Services Under Study

Rhode Island is presently spending over $100 million for a freight-only third main track along the Northeast Corridor alignment, for freight operations to the intermodal port at Davisville. The Rhode Island Department of Transportation provided comments to SEA urging that the future expansion of passenger service on the Northeast Corridor not be impeded by possible interference from freight operations.

5-RI.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Based on the evaluation of railroad capacity issues and information provided by the Applicants including operating plans and existing and projected train traffic, SEA concluded that the existing capacity of the commuter rail line segments evaluated could accommodate the proposed increase in freight train levels without adverse effects on MBTA commuter train service in Rhode Island. Therefore, SEA does not anticipate that mitigation would be required.

5-RI.5 RHODE ISLAND CUMULATIVE EFFECTS

Within the State of Rhode Island, the Applicants do not propose any activities that meet or exceed the Board's thresholds for environmental analysis.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of Rhode Island.

Cumulative Effects Mitigation Measures

Due to a lack of cumulative effects, no mitigation measures are necessary.

5-RI.6 RHODE ISLAND AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. The following table provides a list of agencies and local governments that have submitted environmental comments for the State of Rhode Island. A complete list of entities that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-RI-1
Agencies in Rhode Island Submitting Environmental Comments

Entity	Nature of Comment(s)
Rhode Island and Providence Plantations Department of Transportation	Commuter operations

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.

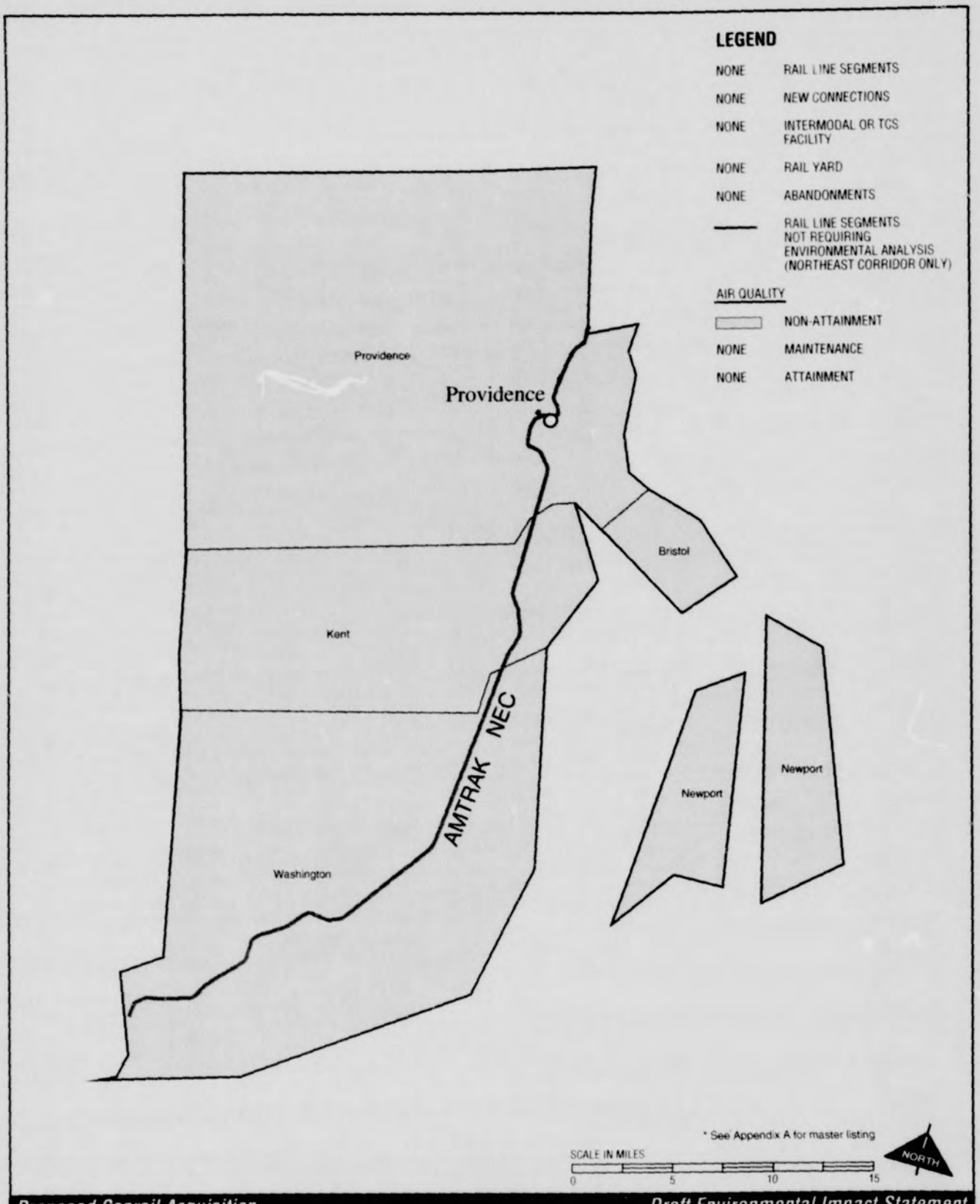

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FIGURE 5-RI-1

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

RHODE ISLAND - NORTHEAST CORRIDOR

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5-SC
SOUTH CAROLINA

This section provides background information for resources in South Carolina. Tables list the proposed Conrail Acquisition-related activities in South Carolina that meet or exceed the Board's thresholds for environmental analysis. This section also presents the various technical analyses conducted for the activities in South Carolina. The analyses highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-SC.1 SOUTH CAROLINA SETTING

South Carolina is located in the South Atlantic region of the United States. Principal products of South Carolina include textile mill products, chemicals and allied products, apparel and related products, paper and allied products, nonelectrical machinery, tobacco, soybeans, cotton, peaches, cattle, eggs, cement, stone, clays, sand and gravel. The railroad network throughout the state provides a means of transporting and distributing many of these goods and for other products to be imported into the state.

Transportation Facilities

Major interstates in South Carolina are I-95, a major north/south route for the eastern United States, I-26, an east/west facility; I-20, an east/west facility; I-77, a north/south facility; and I-85, a north/south facility. These interstates provide service to major cities such as Florence, Columbia Greenville, Spartanburg, and Charleston. Ports in South Carolina include Charleston, Port Royal, and Georgetown.

Railroad Facilities

Sixteen railroads operate in South Carolina, covering a total of 2,372 route miles. CSX and NS are the two Class I Railroads operating in the state. Of the total 2,372 route miles:

- CSX operates on 1,320 route miles in South Carolina, which is 56 percent of the state's total rail miles.

- NS operates on 854 route miles in South Carolina, which is 36 percent of the state's total rail miles.

Cities served by these two railroads include Charleston, Columbia, Florence, Greenwood, and Spartanburg.

CSX operates an intermodal facility in Charleston. Freight classification yards are located in Charleston, Columbia, Florence, Greenwood, and Spartanburg. Other rail-related facilities are located in Charleston, Columbia (Cayce) and Florence. CSX serves the Ports of Charleston and Georgetown. NS operates an intermodal facility in Charleston as well as other rail facilities.

Intercity Passenger and Commuter Rail Service

Amtrak operates three passenger routes in South Carolina. Two use CSX lines through Columbia and Charleston. The third Amtrak route is the Southern Crescent through Spartansburg, Greenville, and Clemson on NS rail lines. There is no commuter rail service in South Carolina.

5-SC.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN SOUTH CAROLINA

In the Operating Plans submitted to the Board, the Applicants indicate that no CSX or NS rail line segments, rail yards, or intermodal facilities in South Carolina would experience increased traffic or activity and that there are no new connections or proposed abandonments that would meet or exceed the Boards's thresholds for environmental analysis. CSX and NS anticipate that due to predicted truck-to-rail diversions, South Carolina would experience a benefit in the areas of emissions, noise, and safety. Figure 5-SC-1 at the end of this state discussion shows general railroad information.

5-SC.3 SOUTH CAROLINA SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-related activities in South Carolina that meet the Board's thresholds for environmental analysis and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Safety (Freight Rail Operations; Highway/Rail At-Grade Crossings).
- Transportation (Highway/Rail At-Grade Crossing Delay: Roadway Effects from Rail Facility Modifications; Navigation).
- Energy.
- Air Quality.
- Noise.
- Cultural Resources.

- Hazardous Materials and Waste Sites.
- Natural Resources.
- Land Use/Socioeconomics.
- Environmental Justice.

Details of the environmental analysis performed for South Carolina follows.

5-SC.4 SOUTH CAROLINA SAFETY: PASSENGER RAIL OPERATIONS

In South Carolina, passenger trains share certain tracks with freight trains. SEA evaluated the potential for increased accidents between freight trains and passenger trains, for both intercity and commuter trains. Because changes in the frequency of rail accidents are directly related to changes in overall train activity, SEA's analysis concentrated on rail line segments carrying both passenger and freight trains that would experience an increase in freight train traffic of one or more trains per day.

In Chapter 4, "System-Wide and Regional Setting, Impacts and Proposed Mitigation," SEA addresses the issue of potential increased risk to passenger train operations associated with the proposed Conrail Acquisition. System-wide, SEA identified 197 freight rail line segments that also carry passenger trains. Of these, SEA analyzed 93 rail line segments that would experience an increase of one or more freight trains per day resulting from the proposed Acquisition. Seven of these rail line segments are located in South Carolina; these rail line segments are part of Amtrak passenger train routes.

The Federal Railroad Administration (FRA) requires reports from railroads concerning all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). FRA requires the same reporting for passenger train accidents. A nationwide average of fewer than 200 passenger train accidents per year (for both Amtrak intercity and urban area commuter trains) has occurred over the last three years. Most of these accidents were relatively minor and rarely involved any fatalities, but because the safety of passengers as well as property is frequently involved, their occurrence is of serious concern.

Given the limited number of passenger rail accidents, SEA was unable to accurately predict the severity, location, or timing of actual accidents. SEA therefore focused on estimating the potential risks of an accident. In this safety analysis, SEA used increased freight activity on rail line segments to estimate the changes in passenger train accident risks. To assess significance, SEA first determined whether the proposed Acquisition-related change in the projected accident rate was greater than an annual increase of 25 percent. SEA then

determined if the predicted accident frequency was less than one accident in 150 years. Thus, SEA determined a potential impact to be significant if the projected annual increase in accidents was greater than 25 percent and the frequency was less than one accident in 150 years.

5-SC.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The pre-Acquisition accident interval for each rail line segment is shown in Table 5-SC-1. Accidents pose potential threats to passengers on the train; therefore, for each rail line segment, risk is expressed as the expected interval between events over the length of the rail line segment. Table 5-SC-1 shows the expected change in years between accidents for the individual rail line segments.

Table 5-SC-1
Estimated Change in Years Between Accidents for Passenger Rail Operations

Site ID	From	To	Miles in State	Pre-Acquisition Accident Interval [a]	Post-Acquisition Accident Interval [a]
C-344	Ashley Jct	Yemassee	54	136	110[b]
C-340	Dillon	Florence	31	253	208
C-341	Florence	Lane	49	197	151
C-342	Lane	St. Stephen	8	945	769
C-343	St. Stephen	Ashley Jct.	39	247	190
C-345	Yemassee, SC	Savannah, GA	37	214	162
C-339	Pembroke	Dillon	5	372	339

[a] Accident Intervals shows years between accidents.
[b] Did not exceed accident rate percentage threshold.

Based on information provided by the railroads and SEA's independent analysis, SEA determined that the increased risk for passenger train accidents for these seven rail line segments did not exceed SEA's criteria for significance. As a result, SEA does not propose mitigation.

5-SC.5 SOUTH CAROLINA SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary concern with the rail transportation of hazardous materials is a spill or accidental release resulting from a train accident. SEA analyzed all rail line segments where the number of car loads containing hazardous materials would increase as a result of the proposed

Acquisition. This resulted in SEA evaluating rail line segments that were below the Board's thresholds for environmental analysis.

The Association of American Railroads (AAR), in conjunction with the Chemical Manufacturer's Association (CMA), developed standards and practices to manage the risk of a hazardous material spill that the railroads have adopted. The practices include identifying "key routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

5-SC.5.1 Rail Line Segment Analysis

As a result of the proposed Conrail Acquisition, the railroads would change the routing of many car loads of hazardous material. The designation of key routes would change as the railroads shift hazardous material traffic from one rail line to another. In addition, certain rail line segments that are currently key routes would carry increased volumes of cars containing hazardous material.

SEA applied two different criteria to determine if the effects of rerouting hazardous material car loads are potentially significant:

1. The volume of hazardous materials transported on a rail line would be 10,000 or more car loads per year. The Acquisition-related change in volume of hazardous material car loads would upgrade a rail line segment to a key route designation.

2. The volume of hazardous material car loads doubles, and exceeds 20,000 or more car loads per year. SEA has termed rail line segments which meet these criteria a "major key route."

Rail line segments that would meet the first criteria are considered "key routes" and warrant the base level mitigation. Rail line segments that meet the second criteria are considered "major key routes" and warrant expanded mitigation. Depending on the individual circumstances, a rail line segment could meet both criteria and therefore warrant both the base level and the expanded mitigation.

5-SC.5.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Potential Effects. Based on the information provided by the Applicants and SEA's independent analysis, SEA determined that 11 rail line segments in South Carolina carrying increased amounts of hazardous material are of potential concern. Table 5-SC-2 shows these rail line segments, indicates the estimated annual car loads of hazardous material for both pre- and post-Acquisition, and identifies the key route status of each. SEA determined that eight rail line segments currently carry less than 10,000 car loads of hazardous material per year but would increase to at least 10,000 car loads per year due to the proposed Acquisition. Three routes would at least double the volume of hazardous material transported, resulting in 20,000 or more car loads per year.

Table 5-SC-2
Rail Line Segments with Significant Increases in Annual Hazardous Material Car Loads

Site ID	Between	And	Miles in State	Estimated Annual Car Loads		Significance Thresholds	
				Pre-Acquisition	Post-Acquisition	New Key Route	Major Key Route
C-339	Pembroke, NC	Dillon, SC	5	7,000	11,000	X	
C-341	Florence, SC	Lane, SC	49	8,000	13,000	X	
C-343	St. Stephens, SC	Ashley Jct., SC	39	9,000	13,000	X	
C-344	Ashley Jct., SC	Yemassee, SC	54	9,000	16,000	X	
C-345	Yemassee, SC	Savannah, GA	37	8,000	13,000	X	
C-351	Monroe, NC	Clinton, SC	73	14,000	49,000		X
C-352	Clinton, SC	Greenwood, SC	28	17,000	49,000		X
C-353	Greenwood, SC	Athens, GA	29	21,000	51,000		X
C-357	Hamlet, NC	McBee, SC	43	4,000	12,000	X	
C-358	McBee, SC	Columbia, SC	108	5,000	12,000	X	
C-359	Columbia, SC	Fairfax, SC	76	6,000	12,000	X	

Preliminary Mitigation Recommendation. SEA recommends requiring CSX to bring the rail line segments into compliance with AAR key route standards and practices for those segments that would become a new key route.

For the three segments in Table 5-SC-2 identified as major key routes, where the volume of hazardous material car loads would at least double and exceed 20,000 car loads, SEA recommends that CSX develop a Hazardous Materials Emergency Response Plan to contain

and minimize the potential effects of any accidents or incidents. SEA will further recommend that CSX conduct hazardous materials accident simulations with the voluntary participation of emergency service providers along the rail line segments at least once every two years. Participants in these plans include county and municipal government, local fire departments, and medical and other emergency response teams.

5-SC.6 SOUTH CAROLINA TRANSPORTATION: PASSENGER RAIL SERVICE

In South Carolina, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-related effects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Amtrak currently operates three passenger routes providing service to the Columbia, Charleston, Kingstree, Camden, Dillon, Florence, and Yemassee on CSX lines, and to Spartanburg, Greenville, and Clemson on an NS rail line. Chapter 4, Section 4.7.1, "Intercity Passenger Rail Service," discusses intercity passenger rail service effects.

Commuter Rail

No commuter rail service exists in South Carolina.

Summary of Potential Effects and Preliminary Recommended Mitigation

Because there is no existing commuter rail service in South Carolina, SEA has determined there will be no adverse effects and no mitigation is required.

5-SC.7 SOUTH CAROLINA CUMULATIVE EFFECTS

Within the State of South Carolina, the Applicants do not propose any activities that meet or exceed the Board's thresholds for environmental analysis.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation,

SEA is unaware of any activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of South Carolina.

Cumulative Effects Mitigation Measures

Due to a lack of cumulative effects, no mitigation measures are necessary.

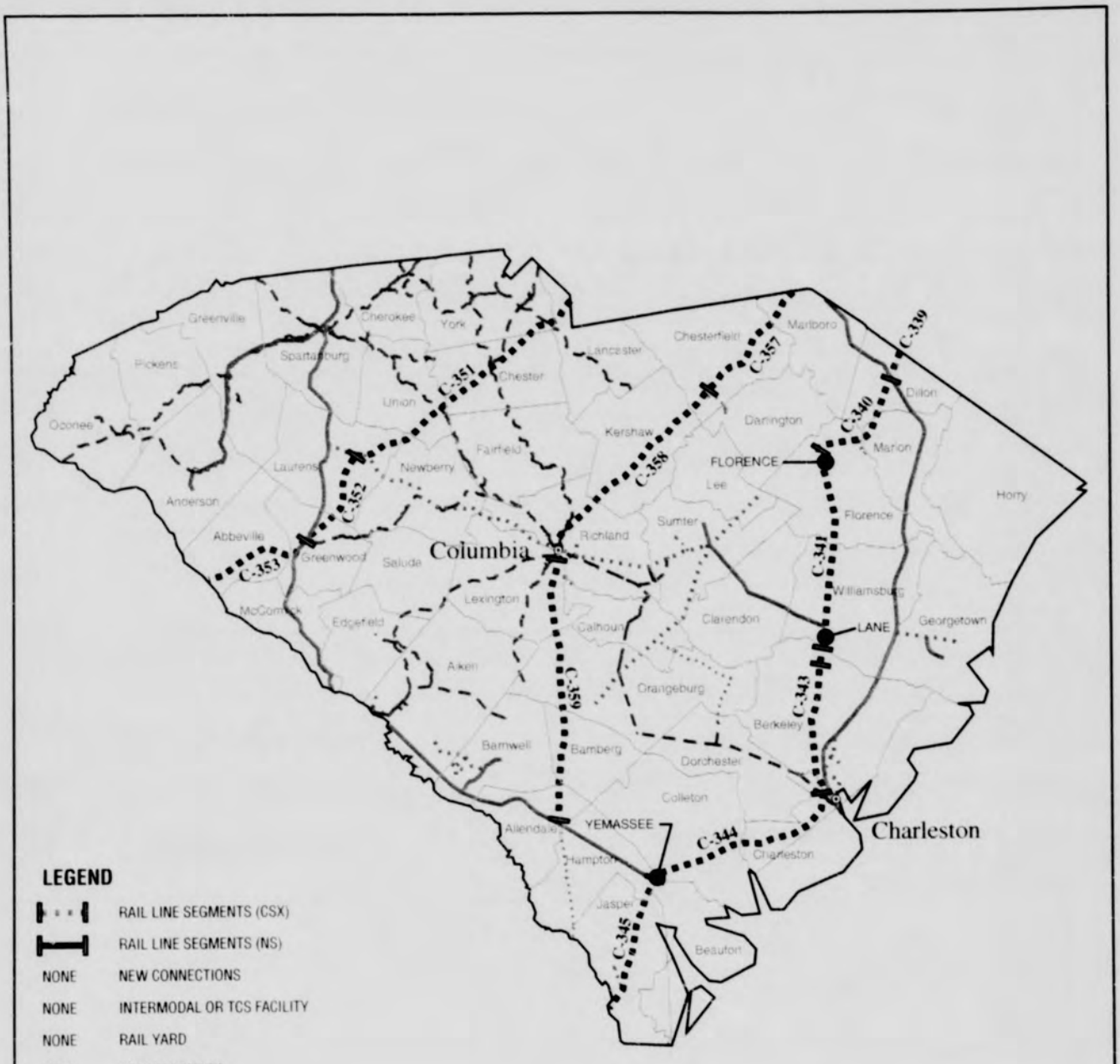
5-SC.8 SOUTH CAROLINA AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. The following table provides a list of agencies and local governments that have submitted environmental comments for the State of South Carolina. A complete list of entities that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-SC-3
Agencies in South Carolina Submitting Environmental Comments

Entity	Nature of Comment(s)
Office of Ocean and Coastal Resources Management	Biological resources

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.



LEGEND

	RAIL LINE SEGMENTS (CSX)
	RAIL LINE SEGMENTS (NS)
NONE	NEW CONNECTIONS
NONE	INTERMODAL OR TCS FACILITY
NONE	RAIL YARD
NONE	ABANDONMENTS
	RAIL LINE SEGMENTS NOT REQUIRING ENVIRONMENTAL ANALYSIS (CSX)
	RAIL LINE SEGMENTS NOT REQUIRING ENVIRONMENTAL ANALYSIS (NORFOLK SOUTHERN)

AIR QUALITY

NONE	NON-ATTAINMENT
NONE	MAINTENANCE
	ATTAINMENT

* See Appendix A for master listing

SCALE IN MILES
0 20 40 60 80

NORTH

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FIGURE 5-SC-1

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

SOUTH CAROLINA - CSX AND NORFOLK SOUTHERN

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5-TN
TENNESSEE

This section provides background information for resources in Tennessee. Tables list the proposed Conrail Acquisition-related activities in Tennessee that meet or exceed the Board's thresholds for environmental analysis. This section also presents the various technical analyses conducted for these activities in Tennessee. The analyses highlight the potential environmental impacts and proposed mitigation action that SEA recommends as part of the Draft EIS study.

5-TN.1 TENNESSEE SETTING

Tennessee is located in the eastern south central United States. Principal products of Tennessee includes chemical products, food, apparel, electrical machinery, cotton, soybeans, cattle, dairy products, stone, zinc, and coal. The railroad network throughout the state provides a means of transporting and distributing many of these goods and for other products imported into the state.

Transportation Facilities

Major Interstates in Tennessee are I-81, a north/south route; I-40, an east/west facility; I-75, a north/south facility; I-65, a north/south route; and I-24, an east/west route. These interstates serve major cities such as Nashville, Knoxville, Chattanooga, and Memphis.

Railroad Facilities

Twenty-one railroads operate in Tennessee, covering a total of 2,634 route miles. There are six Class I Railroads in the state, two of which are CSX and NS. The Burlington Northern Santa Fe Railway Company, Illinois Central Railroad Company, Kansas City Southern Railway Company, Union Pacific Railroad Company are the other four Class I railroads. Of the 2,634 route miles

- CSX operates 1,068 route miles in Tennessee, which is 41 percent of the state's total rail miles.
- NS operates 1,069 route miles in Tennessee, which is 41 percent of the state's total rail miles.

Cities served by CSX and NS include Nashville, Knoxville, Johnson City, Memphis, Chattanooga, and Kingsport.

CSX operates intermodal terminals in Kingsport, Memphis, and Nashville. Rail yards are located in Nashville, Bruceton, Chattanooga, Erwin, Etowah, Kingsport, Knoxville and Memphis. Other rail facilities are located in Chattanooga, Johnson City, and Murfreesboro. NS operates an intermodal terminal and a major rail classification yard in Knoxville. Other NS rail-related facilities are also located in Knoxville and Chattanooga.

Intercity Passenger and Commuter Rail Services

Amtrak uses the Illinois Central Railroad to provide passenger service to Memphis, Dyersburg, and Newbern. Amtrak does not use CSX or NS lines in Tennessee. There is no commuter rail service in the state.

5-TN.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN TENNESSEE

In the Operating Plans submitted to the Board, the Applicants indicate that the expanded CSX and NS systems would reroute movements to more efficient routes that would improve customer service, on-time performance, and car utilization. Tennessee shippers would extend their single-line market reach via CSX and NS into the northeast and midwest. Potential exists for CSX and NS to divert traffic from trucks to rail, which would have a favorable impact upon highway congestion and air quality conditions.

The Applicants predict that, as a result of the proposed Conrail Acquisition, Memphis would become a major gateway for rail traffic moving from the west to New England and the northeast. Tennessee freight customers would benefit from faster transit times and single-line service to and from key eastern markets, and Tennessee's grain customers would benefit from access to grain sources in Indiana and Ohio that are currently served by Conrail.

Tennessee would be served by four of the CSX service routes to be established following the proposed Conrail Acquisition. These routes include the Heartland Service Route, linking Nashville to Detroit and Cleveland, and the Memphis Gateway Service Route, linking Memphis to the northeast and New England. The expanded Memphis Gateway would provide efficient single-line service to markets in the northeastern states, with second-morning intermodal service between Memphis and Cleveland. The Heartland Corridor from Nashville would create a new route for the automotive industry from Nashville to the Great Lakes and Northeast, and is expected to improve transit times by half a day.

Following the proposed Conrail Acquisition, NS would add, improve, and modify a substantial number of train schedules to take advantage of the new route structure, upgraded routes, and traffic diverted from trucks. At Sevier Yard in Knoxville, NS would assemble trains for the Shenandoah Corridor and Kansas City and St. Louis Gateways. General merchandise train service over the NS Shenandoah route would operate between Allentown, Pennsylvania and Knoxville, Tennessee with southbound trains for Macon, Georgia and northbound Allentown trains from Chattanooga and Birmingham, Alabama. Running time between Knoxville and

Allentown would be 33 hours. Tennessee shippers would benefit from improved service, routing options, and reduced transit time. Opportunities exist to divert traffic from truck to rail, which would reduce highway congestion.

Both CSX and NS plan to undertake improvements in Tennessee as part of the proposed Conrail Acquisition. The proposed Conrail Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis in Tennessee include increased train operations on a two rail line segments, increased activity at one intermodal facility, and an increased number of rail cars handled at one rail yard. Figure 5-TN-1, presented at the end of this state discussion, shows the general location of these facilities. Additional segments SEA studied also appear in the figure.

In Tennessee, there are no new rail line connections or proposed abandonments. Tables 5-TN-1, 5-TN-2, and 5-TN-3 show rail segments, intermodal facilities or rail yards in Tennessee. Following these tables are brief descriptions of the activities, where appropriate.

Table 5-TN-1
Tennessee Rail Line Segments which Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles	County	Setting
C-021	Evansville, IN	Amqui, TN	CSX Henderson Subdivision	14	Davidson	Urban/Residential
				4	Montgomery	Residential/Rural
				25	Robertson	Residential/Rural
C-090	Amqui, TN	Nashville, TN	CSX Nashville Terminal	16	Davidson	Residential/Rural

C = CSX
N = NS
S = Shared with Amtrak's Northeast Corridor (not Shared Asset Areas as described in the Application).

Intermodal Facilities

Forrest Intermodal Facility (Shelby, TN) (NS). The NS intermodal facility is located on Spottswood Avenue in southeastern Memphis, Shelby County. (See Figure 5-TN-2 at the end of this state discussion.) Trucks access the facility from I-24 via Airways Boulevard/East Parkway to Spottswood Avenue. Trucks also access the site from I-240 via Lamar Avenue (US 78) and Pendleton Street to Spottswood Avenue.

Table 5-TN-2
Tennessee Intermodal Facilities which Meet or Exceed Board Environmental Thresholds

Site ID	Location	County	Facility	Description	Setting
NM-018	Memphis	Shelby	Forrest	Increase of 76 trucks per day	Urban

Rail Yards

Leewood Rail Yard (Shelby, TN) (CSX). The Leewood Yard is located in Memphis, Shelby County, south of the I-40/I-240 Beltway, near Ellington Street and Chelsea Avenue.

Table 5-TN-3
Rail Yards which Meet or Exceed Board Environmental Thresholds

Site ID	Location	County	Facility	Description	Setting
CY-05	Memphis	Shelby	Leewood	Increase of 33 rail cars per day	Urban

5-TN.3 TENNESSEE SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-related activities in Tennessee that meet the Board's thresholds for environmental analysis and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Safety (Passenger Rail Operations).
- Energy.
- Cultural Resources.
- Hazardous Materials and Waste Sites.
- Natural Resources.
- Land Use/Socioeconomics.

Details of the environmental analysis for Tennessee follow.

5-TN.4 TENNESSEE SAFETY: FREIGHT RAIL OPERATIONS

SEA conducted a statistical analysis to evaluate the potential change in safety on all rail line segments where the proposed Conrail Acquisition would result in eight or more additional freight

trains per day. SEA identified one rail line segment within Tennessee that would experience this level of increased activity. While increased freight train activity would increase the probability of a freight train accident, SEA did not consider an increase significant unless the predicted accident rate shortened the duration between accidents to one every 100 years or less per mile. Table 5-TN-4 presents results of the analysis, showing the approximate mileage of the rail line segment within the state.

Table 5-TN-4
Estimated Change in Years Between Accidents - Freight Rail Operations

Site ID	Between	And	Miles in State	Increase in Trains Per Day	Pre-Acquisition Accident	Post-Acquisition Accident
C-021	Evansville, IN	Amqui	43	9.3	193	135

* Accident Interval figures show the years/mile.

The Federal Railroad Administration (FRA) requires all railroads to submit reports for all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). Train accidents meeting this reporting requirement are relatively infrequent. The FRA reported about 2,600 accidents (3.69 accidents per million train miles[1]) nationally in 1996. Most of these accidents were relatively minor; almost 90 percent of these accidents caused less than $100,000 in damage. In addition, most of the train accidents did not affect on people or non-railroad property.

Accident risk predictions are best expressed by describing the elapsed time expected between any two consecutive events. The current national average is that a main line freight train accident occurs once every 117 years on each mile of route. FRA records, as described in Chapter 4, "System-Wide and Regional Setting Impacts," show a substantial decrease, both in total number of accidents and in accidents per million train miles, a standard industry measure. Because there are few accidents, and most of these accidents are relatively minor, it is not possible for SEA to accurately predict either the frequency or severity of actual accidents.

SEA estimated the change in the risk of an accident resulting from the increased activity on rail line segments as a result of the proposed Conrail Acquisition. Because SEA analyzed rail line segments that vary in length from one mile to more than 100 miles, and because freight train accidents typically have little impact on surrounding areas, SEA expressed all predicted risks of

1 "Train miles" are calculated by multiplying the number of trains by the distance traveled. For example, on a typical 100 mile rail line, one million annual train miles results from operating 28 trains per day every day for 365 days.

accidents on a route-mile basis. Section 3.2 "Safety: Freight Rail Operations," discusses the analysis process in greater detail.

5-TN.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

In Tennessee, SEA found that no rail line segments met its criteria of significance (one accident expected every 100 years or less per mile of route). Therefore, SEA does not recommend mitigation.

5-TN.5 TENNESSEE SAFETY: HIGHWAY/RAIL AT-GRADE CROSSINGS

Increased train activity could affect the safety of roadway users at highway/rail at-grade crossings. To address potential changes in accident frequency, SEA compared existing accident frequency rates with accident frequency rates at all highway/rail at-grade crossings that would experience a Conrail Acquisition-related increase of eight or more trains per day. At these locations, SEA looked at the most recent five years of accident history available, and calculated the potential change in the number of years between accidents. SEA's analysis procedure considered the type of existing warning devices at the highway/rail at-grade crossings, including passive devices (signs or crossbucks), flashing lights, or gates.

To evaluate the significance of potential changes in accident frequency in Tennessee, SEA categorized highway/rail at-grade crossings into two categories:

- Category A consisted of highway/rail at-grade crossings with a history of relatively frequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Tennessee with accident frequency rates at or above the state's 50th highest accident frequency rate of one accident every six years (0.1581 accident frequency rate) to be Category A highway/rail at-grade crossings. To be conservative in the analysis process, SEA also considered highway/rail at-grade crossings with accident frequency rates at or above one accident every seven years (0.15 accident frequency rate) as Category A highway/rail at-grade crossings. For all Category A highway/rail at-grade crossings, SEA considered the relatively small accident frequency rate increase of one accident every 100 years (a 0.01 accident frequency rate increase) to be significant.

- Category B consisted of highway/rail at-grade crossings with a history of relatively infrequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Tennessee with accident frequency rates less than one accident every seven years (less than 0.15 accident frequency rate) to be Category B highway/rail at-grade crossings. For these crossings, SEA considered an accident frequency rate increase of one accident every 20 years (a 0.05 accident frequency rate increase) to be significant.

Table 5.TN-5, presented at the end of this state discussion, presents the results of SEA's analysis. A county by county summary of results follows.

5-TN.5.1 County Analysis

Davidson County

SEA's safety analysis showed that for the three highway/rail at-grade crossings studied in Davidson County, the predicted increases in accident frequency would range from 0.0024 to 0.0070. This translates into a range of increases from one accident every 417 years to one accident every 143 years. SEA found these predicted increases to be below the criteria for significance.

Robertson County

SEA's safety analysis showed that for the 25 highway/rail at-grade crossings studied in Robertson County, the predicted increases in accident frequency would range from 0.0033 to 0.0071. This translates into a range of increases from one accident every 303 years to one accident every 141 years. SEA found these predicted increases to be below the criteria for significance.

5-TN.5.2 Summary of Potential Effects and Preliminary Recommended Mitigation

SEA determined that the proposed Conrail Acquisition would not significantly increase the predicted accident risk at any highway/rail at-grade crossings in Tennessee. Therefore, SEA anticipates that mitigation for highway/rail at-grade crossings would not be necessary.

5-TN.6 TENNESSEE SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary concern with the rail transportation of hazardous materials is a spill or accidental release resulting from a train accident. SEA analyzed all rail line segments where the number of car loads containing hazardous materials would increase as a result of the proposed Acquisition. This resulted in SEA evaluating rail line segments that were below the Board's thresholds for environmental analysis.

The Association of American Railroads (AAR), in conjunction with the Chemical Manufacturer's Association (CMA), developed standards and practices to manage the risk of a hazardous material spill that the railroads have adopted. The practices include identifying "key routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

5-TN.6.1 Rail Line Segment Analysis

As a result of the proposed Conrail Acquisition, the railroads would change the routing of many car loads of hazardous material. The designation of key routes would change as the railroads shift hazardous material traffic from one rail line to another. In addition, certain rail line segments that are currently key routes would carry increased volumes of cars containing hazardous material.

SEA applied two different criteria to determine if the effects of rerouting hazardous material car loads are potentially significant:

1. The volume of hazardous materials transported on a rail line would be 10,000 or more car loads per year. The Acquisition-related change in volume of hazardous material car loads would upgrade a rail line segment to a key route designation.

2. The volume of hazardous material car loads doubles, and exceeds 20,000 or more car loads per year. SEA has termed rail line segments which meet these criteria a "major key route."

Rail line segments that would meet the first criteria are considered "key routes" and warrant the base level mitigation. Rail line segments that meet the second criteria are considered "major key routes" and warrant expanded mitigation. Depending on the individual circumstances, a rail line segment could meet both criteria and therefore warrant both the base level and the expanded mitigation.

5-TN.6.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Based on the information provided by the Applicants and SEA's independent analysis, SEA determined that seven rail line segments in Tennessee carrying increased amounts of hazardous material are of potential concern. Table 5-TN-6 shows these rail line segments, indicates the estimated annual car loads of hazardous material for both pre- and post-Acquisition, and identifies the key route status of each. SEA determined that four rail line segments currently carry less than 10,000 car loads of hazardous material per year but would increase to at least

10,000 car loads per year due to the proposed Acquisition. Two routes would at least double the volume of hazardous material transported, resulting in 20,000 or more car loads per year.

Table 5-TN-6
Rail Line Segments with Significant Increases in Annual Hazardous Material Car Loads

Site ID	Between	And	Miles in State	Estimated Annual Car Loads		Significance Thresholds	
				Pre-Acquisition	Post-Acquisition	New Key Route	Major Key Route
C-289	Louisville, KY	Amqui, TN	41	11,000	25,000		X
C-295	Corbin, KY	Cartersville, GA	199	6,000	12,000	X	
C-373	Nashville, TN	Stevenson, AL	103	22,000	47,000		X
N-361	Asheville, NC	Leadvale, TN	40	8,000	11,000	X	
N-392	New Line, TN	Leadvale, TN	11	9,000	12,000	X	
N-399	Bulls Gap, TN	Frisco, TN	41	8,000	13,000	X	
N-406	Frisco, TN	Kingsport, TN	6	7,000	12,000	X	

Preliminary Mitigation Recommendation. SEA recommends requiring CSX and NS to bring the rail line segments into compliance with AAR key route standards and practices for those segments that would become a new key route.

For the two segments in Table 5-TN-6 identified as major key routes, where the volume of hazardous material car loads would at least double and exceed 20,000 car loads, SEA recommends that CSX develop a Hazardous Materials Emergency Response Plan to contain and minimize the potential effects of any accidents or incidents. SEA will further recommend that CSX conduct hazardous materials accident simulations with the voluntary participation of emergency service providers along the rail line segments at least once every two years. Participants in these plans include county and municipal government, local fire departments, and medical and other emergency response teams.

5-TN.7 TENNESSEE TRANSPORTATION: PASSENGER RAIL SERVICE

In Tennessee, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-related effects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Amtrak currently provides service to the Memphis and Newbern areas on Illinois Central Railroad lines. Amtrak does not use CSX or NS lines in Tennessee. Section 4.7.1, "Intercity Passenger Rail Service," discusses intercity passenger rail service effects.

Commuter Rail

No commuter rail service exists in Tennessee.

Future Services Under Study

The Nashville Area Metropolitan Planning Organization (MPO) is conducting long-term planning, including a possible commuter rail service that may utilize parts of the CSX line segments Evansville, Indiana - Amqui, and Amqui - Nashville. The Amqui - Nashville segment is projected to have 48 freight trains per day post Acquisition. Presently there is no capital funding for the commuter service, nor is there an operating agreement with CSX.

5-TN.7.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Because there is no existing commuter rail service in Tennessee, SEA has determined there will be no adverse effects and no mitigation is required.

5-TN.8 TENNESSEE TRANSPORTATION: ROADWAY CROSSING DELAY

In order to analyze the effects of the proposed Conrail Acquisition on the roadway system at existing highway/rail at-grade crossings, SEA identified the crossings on rail line segments that would exceed the Board's environmental analysis thresholds for air quality. SEA then calculated potential changes in vehicle delay at these crossings where average daily traffic (ADT) volumes are 5,000 or greater. SEA concluded that the potential effect of increased train traffic for highways with ADT volumes below 5,000 would be experienced by very few drivers and the additional vehicular delay would be minimal. The description of levels of service and criteria of significance have been addressed in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," and Appendix C, "Traffic and Transportation."

5-TN.8.1 County Analysis

There are two counties in Tennessee that have highway/rail at-grade crossings for which SEA performed vehicle delay calculations. Table 5-TN-7, presented at the end of this state discussion, contains a summary of these results.

Davidson County

The five crossings analyzed in Davidson County would have a minimal increase in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be C. The largest increase in maximum queue would be one vehicle.

Robertson County

The single crossing analyzed in Robertson County would have a minimal increase in crossing delay per stopped vehicle. The level of service under post-Acquisition conditions would be C. There would be no increase in maximum queue.

5-TN.8.2 Summary of Potential Effects and Preliminary Recommended Mitigation

The proposed Conrail Acquisition would have no significant effect on vehicle delay at highway/rail at-grade crossings in Tennessee. Therefore, SEA does not propose mitigation.

5-TN.9 TENNESSEE TRANSPORTATION: ROADWAY EFFECTS FROM RAIL FACILITY MODIFICATIONS

5-TN.9.1 Intermodal Facilities

One intermodal facility in Memphis would experience an increase in truck activity as a result of the proposed Acquisition. Others would experience decreases in truck activity. The following is a summary of NS intermodal operations in Memphis.

5-TN.9.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Intermodal Facility: Memphis - Forest (Shelby County) (NS)

The NS intermodal facility at Forest Yard is located southeast of downtown Memphis and north of Memphis International Airport. The main gate for truck entry and exit movements is located on Spottswood Avenue. The facility is served by Interstate 240. The primary truck route to and from Interstate 240 is Airways Boulevard/East Parkway and Spottswood Avenue. An alternate route from Interstate 240 includes Lamar Avenue/U.S. 78 and Pendleton Street to Spottswood Avenue.

The Memphis facility currently handles approximately 120 trucks per day. With the proposed Acquisition, this figure would increase to 196 trucks per day. This increase of 76 trucks per day corresponds to 152 additional truck trips per day. SEA assumed that 75 percent of the additional truck trips from Interstate 240 would use Airways Boulevard/East Parkway. The other 25 percent of the additional truck trips from Interstate 240 would use Lamar Avenue/U.S. 78 and Pendleton Street. All of the additional truck trips would use Spottswood Avenue. Table 5-TN-8

summarizes the analysis of traffic volumes to determine the effects of these additional truck trips on the roadways approaching the facility.

SEA's analysis results show that the total daily increase in truck traffic with the proposed Acquisition would be less than two percent of the ADT for all the study area roadways. Therefore, it is SEA's preliminary conclusion that these increases in truck traffic would have insignificant effects on the area roadways.

Table 5-TN-8
Traffic Analysis Summary for Memphis - Forest Intermodal Facility

Roadway Name	Roadway ADT *	Increased Daily Truck Trips Using Roadway	Roadway ADT Percent Increase
Interstate 240	112,820	152	0.13%
Airways Blvd./East Pkwy.	26,800	114	0.43%
U.S. Route 78/Lamar Ave.	27,520	38	0.14%
Pendleton St.	12,800	38	0.30%
Spottswood Ave.	8,600	152	1.77%

* From Tennessee Department of Transportation.

5-TN.10 TENNESSEE TRANSPORTATION: NAVIGATION

To evaluate potential effects of train traffic on shipping where interaction could occur, SEA reviewed proposed Acquisition-related activities on rail line segments, new constructions (rail line connections only), and rail line abandonments that meet or exceed the Board's thresholds for environmental analysis and involve movable bridges.

SEA identified one movable bridge which carries rail traffic over navigable waterways in Tennessee that would meet or exceed the Board's environmental analysis thresholds. CSX owns the bridge which is on rail line segment C-090. The bridge crosses the Cumberland River in Nashville. The proposed Conrail Acquisition would result in an increase of 7.6 trains per day on the bridge.

As stated in Section 3.9.1 "Methods for Navigation Issues," the U.S. Coast Guard has jurisdiction over specific actions affecting navigable waters of the U.S. and in all instances waterborne navigation has the right-of-way. Therefore, any operating constraints due to the post-Acquisition activities would be placed on the railroad and not the waterborne users at movable bridges extending across navigable waterways. The railroads operate bridges under conditions established by the U.S. Coast Guard for the convenience of navigation. SEA evaluated the potential effect of the increase in train traffic on moving the bridge for navigation. Based on the analysis and the small proposed increase in train traffic, SEA expects no adverse impacts from the proposed Conrail Acquisition at this bridge.

5-TN.11 TENNESSEE AIR QUALITY

This section summarizes the change in air pollutant emissions that would result from the proposed Acquisition-related operational changes in the state of Tennessee. The primary air pollutant emission sources from trains and related activities include locomotive emissions on rail line segments, at rail yards, and at intermodal facilities. In addition to locomotive emissions, SEA evaluated emissions from other sources at intermodal facilities (idling trucks, lift cranes, etc.), motor vehicles idling near at-grade crossings, and decreases in truck emissions due to truck-to-rail freight diversions.

To analyze the air quality effects of the proposed Acquisition, SEA evaluated rail line segments, rail yards, and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis defined in Chapter 2, "Proposed Action and Alternatives." See Chapter 3, "Analysis Methods and Potential Mitigation Strategies," for additional information and a summary of the air quality analysis methodology. Appendix E, "Air Quality," contains a detailed description of methodology and detailed tables of results.

SEA addressed air pollutant emissions for sulfur dioxide (SO_2), volatile organic compounds (VOCs), particulate matter (PM), lead (Pb), nitrogen oxides (NO_x) and carbon monoxide (CO). SEA determined that emissions for SO_2, VOCs, PM and Pb would not exceed the emission screening thresholds for environmental analysis in any county. However, SEA found that these thresholds would be exceeded for NO_x in various counties in 17 states, and CO in three counties in two states (IL and OH). NO_x air pollutant emissions may affect a region's ability to attain the National Ambient Air Quality Standards for ozone. CO emissions may affect a local area's ability to attain the National Ambient Air Quality Standards for CO.

Projected activity increases exceed the Board's air quality analysis thresholds for two CSX rail line segments, one CSX rail yard, and one NS intermodal facility in Tennessee. Table 5-TN-9 shows the air quality evaluation process that was followed. SEA identified seven counties in Tennessee which include these rail facilities. For these counties, SEA summed emissions increases from changes on rail line segments and other activities and compared them to the air emission screening level that would require a permit if the source were a stationary source (rather than a mobile source, such as trains, trucks, and other vehicles). If the calculated emissions exceeded this screening level, SEA conducted a detailed emissions analysis known as a "netting analysis" in these counties. The netting analysis considered all emissions increases and decreases from proposed Acquisition-related activity changes. SEA compared the netting analysis results to the air emission screening level and additional analyses were performed for counties where netting analysis results exceeded the air emission screening level. For these counties, SEA inventoried all county air pollutant emissions sources to evaluate if proposed Acquisition-related emissions represented more than one percent of all emissions sources in the county.

Table 5-TN-9
Tennessee Counties Evaluated in Air Quality Analysis

Counties Exceeding the Board's Activity Thresholds	O_3 Status [a]	Exceeds Emissions Screening Level Before Netting	Exceeds Emissions Screening Level After Netting	Exceeds 1 Percent of County Emissions
Davidson	M	Yes	Yes	No
Hamilton	A	No	-	-
Montgomery	A	No	-	-
Robertson	A	Yes	Yes	Yes
Shelby	M	No	-	-
Sullivan	A	No	-	-
Sumner	M	No	-	-

[a] A= Attainment Area, M= Maintenance Area, N= Nonattainment Area, as defined in the Clean Air Act.

The emissions estimates presented in Appendix E, "Air Quality," show that the increased county-wide air pollutant emissions from the facilities described above exceed the threshold for two counties in Tennessee. SEA's analysis results for these counties are presented below.

5-TN.11.1 County Analysis

Davidson County

EPA has designated Davidson County as a nonattainment area for particulate matter, and a maintenance area for O_3. Table 5-TN-10 shows that the net NO_x emissions increase in Davidson County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons per year used to determine if emissions changes are potentially significant. However, the increased NO_x emissions are less than one percent of the existing county-wide NO_x emissions. Therefore, SEA does not expect potential adverse impacts due to this NO_x emissions increase.

Robertson County

EPA has designated Robertson County as an attainment area for all pollutants. Table 5-TN-11 shows that the net NO_x emissions increase in Robertson County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons per year used to determine if emissions changes are potentially significant.

Table 5-TN-10
Davidson County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Evansville, IN, to Amqui, TN	114.48
Rail Segment (CSX)	Amqui, TN, to Nashville, TN	79.49
Rail Segment (CSX)	Nashville, TN, to Decatur, AL	71.59
Rail Segment (CSX)	Louisville, KY, to Amqui, TN	-3.16
Rail Segment (CSX)	Nashville, TN, to McKenzie, TN	26.84
Rail Segment (CSX)	Nashville, TN, to Stevenson, AL	11.64
Rail Yard (CSX)	Nashville - Radnor Yard	19.65
Intermodal Facility (CSX)	Nashville, TN	7.77
Truck Diversions (both)	County-wide	-84.47
At-grade Crossings (both)	Affected Crossings >5000 Vehicles/Day*	0.37
Total Acquisition-related Net NO_x Emissions Increase		244.20
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		26,131.70
Percent Increase in County NO_x Emissions		0.93%

* "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

The increased NO_x emissions in Robertson County are over one percent of the existing (1995) county-wide NO_x emissions. However, Robertson County is a largely rural area north of the Nashville metropolitan area, so its existing NO_x emissions are small in comparison to urban areas that have O_3 nonattainment problems. Therefore, SEA does not expect potential adverse impacts despite the relatively large percentage increase in emissions.

5-TN.11.2 Summary of Potential Effects and Preliminary Recommended Mitigation

While there are localized increases in emissions in some counties, the increases are not likely to affect compliance with air quality standards. Therefore, SEA has determined that air quality will not be significantly affected and no mitigation is necessary. See system-wide and regional discussion in Section 4.12 "Air Quality."

Table 5-TN-11
Robertson County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Evansville, IN to Amqui, TN	248.21
Truck Diversions	County-wide	-23.04
At-grade Crossings (both)	Affected Crossings >5000 Vehicles/Day *	0.02
Total Acquisition-related Net NO_x Emissions Increase		225.19
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		2,509.65
Percent Increase in County NO_x Emissions		8.97%

* "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

5-TN.12 TENNESSEE NOISE

To analyze the potential noise impacts of the proposed Acquisition, SEA evaluated rail line segments, rail yards and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis of noise. Although new construction projects and rail line abandonments can result in noise increases, the noise effects would be temporary and therefore, SEA did not evaluate them.

5-TN.12.1 Proposed Activities

Train noise sources include diesel locomotive engine and wheel/rail interaction noise (or wayside noise) and horn noise. Wayside noise affects all locations in the vicinity of the rail facility, and generally diminishes with distance from the source. Horn noise is an additional noise source at grade crossings, and also generally diminishes with distance. SEA performed an analysis to identify rail line segments, rail yards and intermodal facilities where the proposed changes in operations meet or exceed the Board's environmental analysis thresholds at 49 CFR 1105.7(e)(6). Where the proposed rail activity exceeded these thresholds, SEA calculated the 65 dBA L_{dn} noise contours for the pre- and post-Acquisition conditions. SEA based the noise level impact assessment on the projected activity level data provided by the railroads. SEA counted sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) within the noise contours for both pre-Acquisition and post-Acquisition operating conditions.

The CSX rail line segments and the NS intermodal facility that would experience increases in traffic or activity meeting the Board's environmental analysis thresholds for Tennessee are listed in Tables 5-TN-12 and 5-TN-13.

The counties where these facilities are located are listed in Section 5-TN.2, "Proposed Conrail Acquisition Activities in Tennessee."

Table 5-TN-12
Rail Line Segments in Tennessee that Meet or Exceed the Board's Thresholds for Noise Analysis

Site ID	Segment		Trains Per Day			Percent Change in Gross Ton Miles
	From	To	Pre-Acquisition	Post-Acquisition	Increase	
C-021 *	Evansville	Amqui, TN	23.4	32.7	9.3	54

* SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

Table 5-TN-13
Intermodal Facilities That Meet of Exceed the Board's Thresholds for Noise Analysis

Site ID	Intermodal Facility Location	Trucks Per Day		Change in ADT on local roads (%)	Change in dBA	Approx. distance to 65 dBA L_{dn} contour (feet)
		Pre-Acquisition	Post-Acquisition			
NM-18 *	Memphis (Forrest)	120	196	0.1-1.8	2.0	109

* SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

5-TN.12.2 Summary of Potential Effects and Preliminary Recommended Mitigation

There are different noise mitigation techniques used to reduce horn noise and wayside noise. These different types of noise and mitigation techniques are as follows:

Grade Crossing Noise Effects. The Federal Railroad Administration (FRA) has indicated that it will propose new rules on train horn blowing procedures in 1998. These new rules may allow communities to apply for an exception to horn blowing at certain grade crossings that meet explicit criteria. These criteria relate to so-called "quiet zones" where FRA would no longer require train engineers to sound the train horn at grade crossings with special upgraded safety features. Examples of such safety features include four-quadrant gates and median barriers that preclude motorists from entering the crossings while the crossing arm is down. Until FRA develops and implements these regulations, these measures are not feasible for SEA to require

as mitigation. However, communities will have the opportunity to qualify for "quiet zones" once the FRA regulations are in place.

Wayside Noise Effect. Wayside noise is the sound of a train as it passes by. Wayside noise is comprised of steel wheel/ rail interaction noise, and locomotive diesel engine noise. This type of noise can be reduced by constructing barriers between the railway noise source and adjoining land uses, and by installing building sound insulation. Noise barriers include earth berms and walls that block the sound. Rail lubrication can be used to reduce "wheel squeal" noise on curved track. Building sound insulation consists of special windows and other building treatments that reduce interior noise. Noise barriers are the preferred type of noise mitigation for this project since barriers can be built on railroad property. Additional discussion of noise mitigation measures is included in Appendix F, "Noise Methods."

As noted above, for receptors near grade crossings that would experience increases in noise resulting from horn sounding, mitigation is not currently feasible. For areas affected by wayside noise, SEA considered rail line segments eligible for noise mitigation for noise sensitive receptors exposed to at least 70 dBA L_{dn} and an increase of at least 5 dBA L_{dn} due to increased rail activity.

It is SEA's preliminary conclusion that no rail line segments, rail yards, or intermodal facilities in the State of Tennessee warrant noise mitigation according to the project mitigation criteria.

5-TN.13 TENNESSEE ENVIRONMENTAL JUSTICE

As part of its analysis, SEA examined activities associated with the proposed Conrail Acquisition for environmental justice impacts (disproportionately high and adverse impacts to minority and low-income populations) in accordance with Executive Order 12898. As described in the Environmental Justice Methodology in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," SEA first categorized the nature of the populations in areas where Acquisition-related activities are proposed. SEA determined whether the population in such areas met the following environmental justice thresholds: (1) greater than 50 percent of the population is minority or low-income, or (2) the minority or low-income population percentage is 10 percent greater than the minority or low-income population percentage in the county.

Next, SEA ascertained whether this population fell within an area of potential effect. SEA defined a typical zone on either side of a rail line segment or proposed construction site, or bordering a railroad intermodal facility or rail yard, as an area of potential effect. In general, the extent of an area of potential effect may vary depending on the nature of the changes in rail activity associated with it, but such areas typically extend 400 to 1500 feet out from the rail line segment or facility being analyzed.

SEA then evaluated these areas of potential effect for proposed Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis. In this analysis, SEA evaluated potential impacts on safety, transportation, air quality, noise, cultural resources,

hazardous waste sites, hazardous materials transport, natural resources, and land use/socioeconomic effects.

SEA developed and executed expanded public outreach efforts for those jurisdictions that met both SEA's thresholds for environmental justice and the Board's thresholds for environmental significance. SEA designed the public outreach process to seek widespread notice and dissemination of SEA's environmental impact analysis; provide additional opportunities for community input to the NEPA process; solicit information about cumulative effects in minority and low-income communities; and allow minority and low-income communities to assist in fashioning appropriate alternatives and mitigation measures. SEA is placing additional copies of the DEIS in jurisdictions with high proportions of minority and low-income populations that do not have significant environmental impacts which could result from the proposed Acquisition.

This section presents the results of those evaluations and analysis. A complete list of all the sites analyzed for environmental justice impacts is presented in Appendix K.

5-TN.13.1 Tennessee Environmental Justice Setting

There are no new constructions or abandonments proposed in the state of Tennessee as part of the proposed Conrail Acquisition.

Rail Yards

There is one rail yard with proposed changes in rail cars handled in Tennessee. The following table presents the existing minority and low-income composition of the area of potential effect surrounding the Leewood rail yard, located in Memphis.

Table 5-TN-14
County and Site Summary for Rail Yards in Tennessee

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Minority Population > 50% or < 50%, but 10% > County	Low-Income Population > 50% or < 50%, but 10% > County	Population Meets Threshold for EJ Analysis
Shelby County	826,330	45.4%	18.3%	NA		
Leewood (Memphis) (CY-05)	2,257	99.7%	45.9%	Yes	Yes	Yes

The population within the area of potential effect for the Leewood rail yard meets the minority and low-income population thresholds for further environmental justice analysis.

Intermodal Sites

There is one intermodal site with proposed changes in truck traffic in the state of Tennessee. Table 5-TN-15 presents the existing minority and low-income composition of the area of potential effect surrounding the Forrest intermodal facility, located in Memphis, and the associated truck routes. Trucks access the site by Airways Boulevard, Pendleton Street, and Spottswood Avenue.

Table 5-TN-15
County and Site Summary for Intermodal Sites and Truck Routes in Tennessee

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Minority Population > 50% or < 50%, but 10% > County	Low-Income Population > 50% or < 50%, but 10% > County	Population Meets Threshold for EJ Analysis
Shelby County	826,330	45.4%	18.3%	NA		
Forrest (Memphis) (NM-18)	11,435	74.3%	34.7%	Yes	Yes	Yes
Forrest (Memphis) Truck Routes (NM-18)	34,337	88.6%	32.0%	Yes	Yes	Yes

The population within the area of potential effect for both the Forrest site and the associated truck route meets the minority and low-income population thresholds for further environmental justice.

Rail Line Segments

Table 5-TN-16 presents the existing minority and low-income composition of the area of potential effect surrounding the rail line segment located in Davidson County that meets the environmental justice population thresholds in Tennessee.

Table 5-TN-16
Tennessee Summary for Rail Line Segments

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Minority Population > 50% or < 50%, but 10% > County	Low Income Population > 50% or < 50%, but 10% > County	Population Meets Threshold for EJ Analysis
Davidson County	510,784	25.8%	13.0%	NA		
Amqui - Nashville (C-090)	5,324	54.1%	28.7%	Yes	Yes	Yes

5-TN.13.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Based on currently available information, SEA has identified no proposed activities that meet the thresholds for environmental justice analysis, and SEA finds, therefore, that no environmental justice effects exist in Tennessee as a result of the proposed Conrail Acquisition, and no mitigation would be necessary.

5-TN.14 TENNESSEE CUMULATIVE EFFECTS

Within the State of Tennessee, the Applicants propose the following activities that meet or exceed the Board's thresholds for environmental analysis: increased traffic on two rail line segments, and increased activities at one intermodal facility and at one rail yard.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of Tennessee.

Cumulative Effects Mitigation Measures

Due to a lack of cumulative effects, no mitigation measures are necessary.

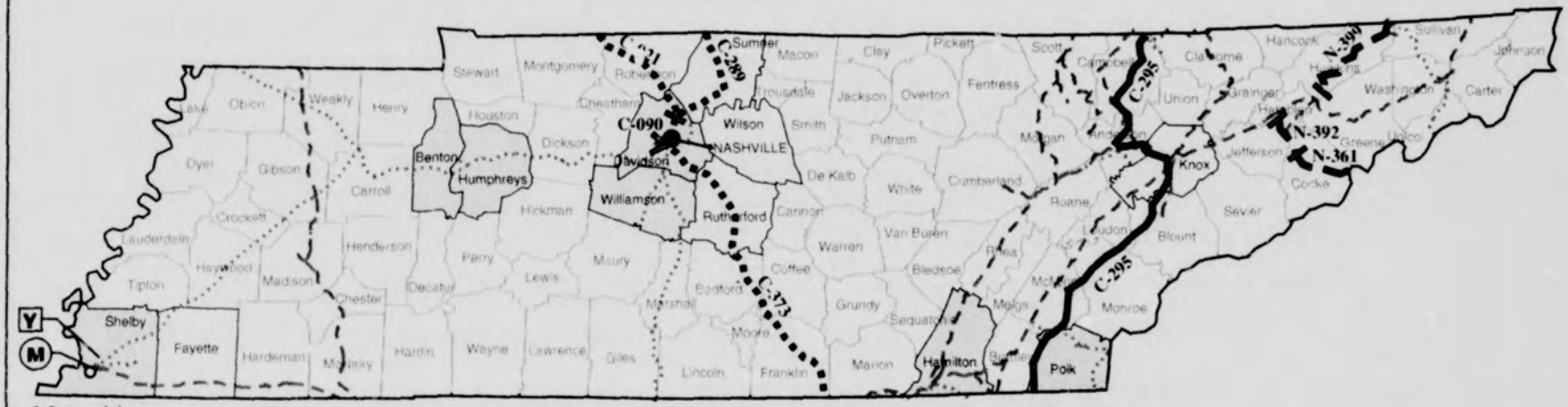
5-TN.15 TENNESSEE AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. Table 5-TN-17 provides a list of agencies and local governments that have submitted environmental comments for the State of Tennessee. A complete list of entities that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-TN-17
Agencies in Tennessee Submitting Environmental Comments

Entity	Nature of Comment(s)
Nashville Area Metropolitan Planning Organization	Air, at-grade crossing safety, and commuter operations

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.



LEGEND

CSX	NS	
		RAIL LINE SEGMENTS
		RAIL LINE SEGMENTS NOT REQUIRING ENVIRONMENTAL ANALYSIS
NONE	NONE	NEW CONNECTIONS

CSX	NS	
NONE	(M)	INTERMODAL OR TCS FACILITY
[Y]	NONE	RAIL YARD
NONE	NONE	ABANDONMENTS

AIR QUALITY

- NON-ATTAINMENT
- MAINTENANCE
- ATTAINMENT

* See Appendix A for master listing

SCALE IN MILES: 0 25 50 75 100 125

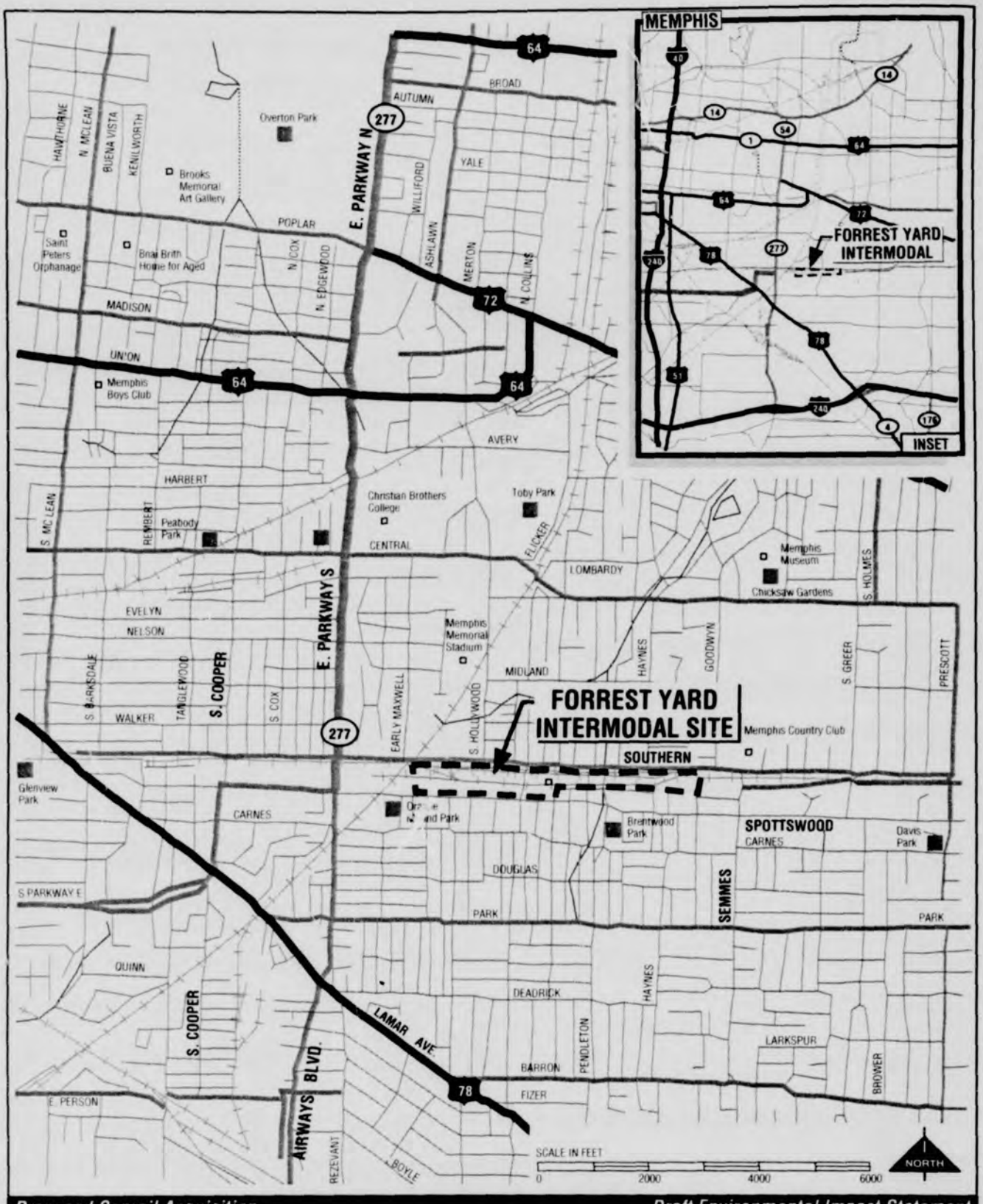
NORTH

Proposed Conrail Acquisition — *Draft Environmental Impact Statement*

FIGURE 5-TN-1

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

TENNESSEE - CSX AND NORFOLK SOUTHERN



Proposed Conrail Acquisition *Draft Environmental Impact Statement*

FIGURE 5-TN-2

FORREST YARD INTERMODAL SITE , MEMPHIS,TENNESSEE

NORFOLK SOUTHERN

Table 5.TN-1
Tennessee
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
DAVIDSON	C-021	348096G	PUBLIC	Passive	100	2	50	0	23.4	32.7	0.0578	0.0648	0.0070	
DAVIDSON	C-021	348097N	W. MONTICELLO AVE	Passive	100	2	50	0	23.4	32.7	0.0578	0.0648	0.0070	
DAVIDSON	C-021	348108Y	BAKERS STATION RD	Flasher	50	2	50	0	23.4	32.7	0.0146	0.0171	0.0024	
ROBERTSON	C-021	348110A	INDUSTRIAL DRIVE	Flasher	752	2	35	0	23.4	32.7	0.0345	0.0393	0.0047	
ROBERTSON	C-021	348112N	E SOUTH ST	Flasher	539	2	50	0	23.4	32.7	0.0311	0.0355	0.0044	
ROBERTSON	C-021	348113V	COLLEGE ST	Flasher	2,050	2	50	0	23.4	32.7	0.0463	0.0518	0.0055	
ROBERTSON	C-021	348114C	MAIN ST	Flasher	2,026	2	50	0	23.4	32.7	0.0461	0.0516	0.0055	
ROBERTSON	C-021	348115J	WILSON ST	Flasher	631	2	50	0	23.4	32.7	0.0327	0.0373	0.0046	
ROBERTSON	C-021	348116R	LIGHTS CHAPEL RD	Flasher	1,572	2	50	0	23.4	32.7	0.0430	0.0483	0.0053	
ROBERTSON	C-021	348119L	COURTLAND RD	Flasher	168	2	50	0	23.4	32.7	0.0211	0.0244	0.0033	
ROBERTSON	C-021	348120F	OAKLAND ROAD	Flasher	324	2	50	0	23.4	32.7	0.0264	0.0303	0.0039	
ROBERTSON	C-021	348122U	W HILLCREST RD	Flasher	1,274	2	50	0	23.4	32.7	0.0405	0.0456	0.0052	
ROBERTSON	C-021	348124H	MAIN ST	Flasher	5,790	2	50	0	23.4	32.7	0.0602	0.0662	0.0060	
ROBERTSON	C-021	348125P	CHEATHAM ST	Flasher	809	2	50	0	23.4	32.7	0.0353	0.0401	0.0048	
ROBERTSON	C-021	348126W	RICHARDS	Flasher	700	2	50	0	23.4	32.7	0.0338	0.0384	0.0047	
ROBERTSON	C-021	348130L	HOLMAN ROAD	Passive	20	2	50	0	23.4	32.7	0.0232	0.0271	0.0039	
ROBERTSON	C-021	348131T	MATTHEWS RD	Passive	62	2	50	0	23.4	32.7	0.0514	0.0580	0.0067	
ROBERTSON	C-021	348132A	(KINNEY)	Passive	36	2	50	0	23.4	32.7	0.0445	0.0507	0.0062	
ROBERTSON	C-021	348135V	MAIN ST/ WASHINGTON	Gate	1,750	2	50	0	23.4	32.7	0.0254	0.0288	0.0034	
ROBERTSON	C-021	348136C	AYERS ST	Passive	14	2	50	0	23.4	32.7	0.0341	0.0393	0.0052	
ROBERTSON	C-021	348137J	GOSPEL ST	Passive	71	2	50	0	23.4	32.7	0.0531	0.0599	0.0068	
ROBERTSON	C-021	348138R	BYRDS CROSSING	Passive	30	2	50	0	23.4	32.7	0.0264	0.0307	0.0043	
ROBERTSON	C-021	348139X	BELL CROSS ROAD	Passive	70	2	50	0	23.4	32.7	0.0341	0.0393	0.0052	
ROBERTSON	C-021	348140S	MURPHY	Passive	114	1	50	0	23.4	32.7	0.0364	0.0418	0.0054	
ROBERTSON	C-021	348141Y	S. COMMERCE ST	Flasher	212	2	50	0	23.4	32.7	0.0228	0.0264	0.0035	
ROBERTSON	C-021	348143M	S ADAMS ST	Passive	107	2	50	0	23.4	32.7	0.0587	0.0658	0.0071	
ROBERTSON	C-021	348147P	BAGBY ROAD	Passive	30	2	50	0	23.4	32.7	0.0264	0.0307	0.0043	
ROBERTSON	C-021	348149D	QUALLS ROAD	Passive	59	2	50	0	23.4	32.7	0.0507	0.0573	0.0066	

Table 5-TN-7
Tennessee
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	*Pre Acquisition*								*Post Acquisition*								
						Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Davidson	C-090	350207W	CRAIGHEAD	4	8,400	40.8	40	6,000	525	9	2.43	18.24	C	48.4	40	6,200	638	9	2.50	22.77	C	
Davidson	C-090	350208D	BERRY RD	2	6,100	40.8	40	6,000	381	13	2.56	19.15	C	48.4	40	6,200	464	14	2.62	23.90	C	
Davidson	C-090	348027Y	DAVIDSON RD	2	7,000	40.8	40	6,000	437	15	2.62	19.61	C	48.4	40	6,200	532	16	2.68	24.47	C	
Davidson	C-090	349218M	THOMPSON LANE	4	21,600	40.8	50	6,000	1141	20	2.46	15.60	C	48.4	50	6,200	1386	21	2.52	19.41	C	
Davidson	C-090	349226E	UNA-ANTIOCH	2	8,000	40.8	50	6,000	422	15	2.27	14.40	B	48.4	50	6,200	513	15	2.33	17.92	C	
Robertson	C-021	348124H	MAIN ST	2	5,790	23.4	40	6,000	207	13	2.53	10.89	B	32.7	40	6,200	297	13	2.60	16.02	C	

5-VA
VIRGINIA

This section provides background information for resources in Virginia. Tables list the proposed Conrail Acquisition-related activities in Virginia that meet or exceed the Board's thresholds for environmental analysis. This section also presents the various technical analyses conducted for these activities in Virginia. The analyses highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-VA.1 VIRGINIA SETTING

Virginia is a mid-Atlantic coast state. Principal products of Virginia include chemicals, tobacco, food products, electrical equipment and supplies, transportation equipment, textiles, farm products, cattle, milk, poultry, coal and stone. The railroad network throughout the state provides a means of transporting and distributing many of these goods and for other products imported into the state.

Transportation Facilities

Major interstates in Virginia are I-95, a major north/south facility in the eastern United States; I-81, a north/south facility; and I-64, an east/west facility. These interstates serve cities such as Richmond, Alexandria, Fredericksburg, Roanoke, Norfolk, Newport News and Petersburg. Ports in the state include the Hampton Roads and Norfolk.

Railroad Facilities

Eleven railroads operate in Virginia totaling of 3,284 route miles. Conrail, CSX, and NS are the three Class I Railroads in Virginia. Of the total 3,284 route miles:

- Conrail operates two route miles in Virginia, which is less than 1 percent of the state's total rail miles.
- CSX operates 1,053 route miles in Virginia, which is 32 percent of the state's total rail miles.
- NS operates 2,160 route miles in Virginia, which is 66 percent of the state's total rail miles.

The three railroads serve the cities of Alexandria, Newport News, Norfolk, Portsmouth, Richmond, Roanoke, and Clifton Forge.

CSX operates an intermodal terminal at Portsmouth. Freight classification yards, as well as other rail facilities, are located in Clifton Forge, Newport News, Norfolk, Portsmouth, Roanoke, and Richmond. NS maintains locomotives and freight cars at shops in Roanoke. NS also operates intermodal facilities in Alexandria, Norfolk, and Front Royal, coal export terminals at Norfolk and Newport News.

Intercity Passenger and Commuter Rail Services

Amtrak operates four routes in Virginia (three on CSX tracks and one on NS tracks). The CSX route segments are from Washington, D.C./Alexandria, Virginia to Richmond and south to North Carolina. Other CSX segments are Richmond to Newport News, and Charlottesville to Clifton Forge, which is the Amtrak Cardinal route. NS trackage is used between Alexandria, and Danville, Virginia, serving Manassas, Culpeper, Charlottesville, and Lynchburg on the Southern Crescent route. Other points served include Woodbridge, Fredericksburg, Ashland, Petersburg, Williamsburg, and Staunton.

Commuter rail passenger service is provided in Virginia by Virginia Railway Express (VRE) on two routes between Fredericksburg and Manassas, and Washington, D.C. VRE operates 12 trains on the Fredericksburg Line of CSX and 14 trains on the Manassas Line of NS. Both commuter lines use CSX and Conrail between Alexandria and Washington Union Station.

5-VA.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN VIRGINIA

In the Operating Plans submitted to the Board, the Applicants indicate that both CSX and NS would reroute movements to more efficient routes that would improve customer service, on-time performance, and car utilization. Through this proposed Conrail Acquisition, Virginia shippers would extend their single-line market reach via CSX and NS into the Northeast and Midwest. New truck-competitive rail service should help alleviate congestion along major Virginia interstate highway routes, and traffic in mainline rail corridors would operate more efficiently.

Virginia would be served by six major CSX service route combinations, including rail lines linking Virginia with the Northeast and New England, as well as points in the Midwest and South. These services routes would provide rail service between nearly all major areas in the South and Ohio Valley, as well as the Mississippi River gateways for interchange of traffic with western railroads.

In addition, as a result of new intermodal services that would become available, potential exists for diverting traffic from trucks to rail along the entire East Coast, which would have a favorable impact upon highway congestion and air quality conditions. Further, new rail service from the

Monogahela coal fields of western Pennsylvania would add another source of coal traffic for the CSX-served export docks at Newport News, and NS-served export docks at Norfolk.

NS plans significant capacity improvements on its Shenandoah Corridor, including raising clearances between Riverton and Roanoke. Sidings are planned at Clark, Rural Retreat, Glade Springs and Bristol. These projects are expected to improve operations and permit NS to offer reduced transit times and improved on-time performance.

New expedited coal service would be available via the NS Shenandoah route. The rerouting via Hagerstown and the Shenandoah Valley would save an average of 143 miles per trip. Transit times would be reduced between 25 and 30 hours.

Both CSX and NS would undertake increased rail activities in Virginia as part of the proposed Conrail Acquisition. The proposed Conrail Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis in Virginia include increased train operations on a total of seven rail line segments.

In Virginia, there are no intermodal facilities, rail yards, new connections or proposed abandonments that would meet or exceed the Board's thresholds for environmental analysis. Table 5-VA-1 shows rail segments in Virginia. Figures 5-VA-1a and 5-VA-1b, presented at the end of this state discussion, show the general locations of these facilities.

5-VA.3 VIRGINIA SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-related activities in Virginia that meet the Board's thresholds for environmental analysis and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Transportation (Roadway Effects from Rail Facility Modifications).
- Energy.
- Cultural Resources.
- Hazardous Materials and Waste Sites.
- Natural Resources.
- Land Use/Socioeconomics.

Details of the environmental analysis for Virginia follow.

Table 5-VA-1
Virginia Rail Line Segments which Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles	County/City	Setting
C-002	Virginia Ave., D.C.	Potomac Yard	Conrail RF&P Subdivision, Landover Line	4	Arlington	Urban
C-100	Dowsell, VA	Fredericksburg, VA	CSX RF & P Subdivision	23	Caroline	Rural with sporadic development/ Agriculture
				2	Fredericks-burg City	Urban
				2	Hanover	Rural with sporadic development/ Agriculture
				10	Spotsylvania	Rural with sporadic development/ Agriculture
C-101	Fredericksburg, VA	Potomac Yard, VA	CSX RF&P Subdivision	6	Alexandria City	Urban
				1	Arlington	Urban
				13	Fairfax	Suburban/Urban
				2	Fredericksburg City	Suburban/Urban
				10	Prince William	Suburban/Urban
				17	Stafford	Suburban/Rural
C-102	Richmond, VA	Doswell, VA	CSX RF&P Subdivision	6	Hanover	Rural with sporadic development/Agriculture
				7	Henrico	Suburban/Urban
				11	Richmond City	Urban/Industrial
C-103	S. Richmond, VA	Weldon, VA	CSX North End Subdivision	17	Chesterfield	Suburban/Rural/Agriculture
				3	Colonial Heights City	Urban/Industrial

Table 5-VA-1
Virginia Rail Line Segments which Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles	County/City	Setting
C-103	S. Richmond, VA	Weldon, NC	CSX North End Subdivision	11	Dinwiddie	Rural/Agriculture
				17	Greensville	Rural with sporadic development/ Agriculture
				4	Petersburg City	Urban/Industrial
				3	Prince George	Industrial
				3	Richmond City	Urban/Industrial
				16	Sussex	Rural with sporadic development/ Agriculture
N-091	Harrisburg, PA	Riverton Jct., VA	NS Harrisburg to Roanoke	17	Clarke	Rural with sporadic development/ Agriculture
				7	Warren	Rural with sporadic development/ Agriculture
N-100	Riverton Jct, VA	Roanoke, VA	NS Hagerstown, Roanoke Districts	34	Augusta	Rural with sporadic development/ Agriculture
				31	Botetourt	Rural with sporadic development/ Agriculture
				2	Buena Vista City	Rural/Agriculture
				31	Page	Rural/Agriculture
				7	Roanoke	Rural/Suburban
				33	Rockbridge	Rural with sporadic development/ Agriculture
				21	Rockingham	Rural/Agriculture
				17	Warren	Rural with sporadic development/ Agriculture