Chapter 2
Revised Information

This chapter is composed of two parts: (a) the reporting of results from additional evaluations; and (b) the documenting of updated information and corrections to the Draft EIS. Sections 2.1 to 2.13 contain additional evaluations that were conducted in specific resource areas such as noise, air quality, and biological resources in response to comments on the Draft EIS. These sections also include expanded discussions in areas such as school safety and property values. Section 2.14 contains corrections, errata and supporting information that updates the Draft EIS.

Specific discussions in Chapter 2 and the sections in which they can be found are:

- Section 2.1, Revised Matteson Connection, discusses the additional evaluation and potential environmental effects resulting from CN's revised design to increase the main track operating speeds for through trains and reduce traffic delays at several at-grade crossings in the Matteson area. The additional evaluations resulted in SEA modifying construction-related effects and reducing potential traffic delay projections at several highway/rail at-grade crossings in the Matteson area.
- Section 2.2, Revised Double Track–Leithton Connection, discusses the Applicants' modifications to the proposed double track connection between the EJ&E and the CN rail lines that would allow for higher train speeds at this connection and reduce the effect on vehicle traffic delay at several highway/rail at-grade crossings in the Mundelein area. SEA concluded that the modifications would accomplish their intended objectives but would result in a slightly larger land disturbance than the area evaluated in the Draft EIS.
- Section 2.3, Commuter Rail Service, describes the additional analysis conducted for the Proposed Action to assess effects on the Metra STAR Line service and the NICTD commuter service. SEA concluded that the Proposed Action would not adversely affect the potential implementation of STAR Line service on the EJ&E rail line.
- Section 2.4, School Related Issues, presents additional evaluation on the proximity of schools to the rail lines affected by the Proposed Action. SEA determined that mitigation beyond that voluntarily offered by the Applicants is not warranted.
- Section 2.5, Updated Transportation Information and Analysis, presents the revised analysis of the transportation systems based on new and revised information on average daily traffic counts and effects resulting from transaction-related changes to highway/rail at-grade crossings due to increased vehicle delays and regional mobility. In addition to the Applicants' voluntary mitigation measures, SEA has proposed mitigation to address grade separations, traffic advisory signs, train operational changes at connections, and signalized intersections in close proximity to highway/rail at-grade crossings.
- Section 2.6, Emergency Services, discusses the revised analysis of delays affecting emergency service providers that could result from increased train operations at specific at-grade crossings. Of the eleven facilities identified in the Draft EIS as being potentially substantially affected, SEA has proposed mitigation for all but one. In addition, of the 10 facilities reevaluated in this Final EIS, SEA proposes mitigation for three.
- Section 2.7, Hazardous Materials Transportation and Safety, presents the revised analysis of hazardous materials transport and the potential effects of spillage on water resources

and wetlands. The types of hazardous materials hauled by the Applicants and spill prevention measures are also presented in greater detail than in the Draft EIS. SEA concludes that plant communities, wildlife, and natural areas along the EJ&E rail line would experience a higher probability of exposure to hazardous material spills as compared to current conditions, but that attempting to predict the specific location of a release, the type of release, and the fate and transport of the release is too speculative. SEA concluded that hazardous material releases have historically been, and are expected to continue to be, extremely rare.

- Section 2.8, Property Values, describes additional analysis conducted to assess potential effects on property values and on residential property taxes. SEA concludes that the existence of a rail line in the community has been appropriately accounted for in the value of property near both the EJ&E and CN rail lines.
- Section 2.9, Environmental Justice, discusses the potential effects on Environmental Justice in communities based on new and revised information. SEA determined that minority and low-income populations along the EJ&E rail line would not experience disproportionate negative effects on safety, train noise or delays at highway/rail at-grade crossings.
- Section 2.10, Air Quality and Climate, discusses the additional air quality analysis and the resulting assessment of potential effects. SEA's additional analysis shows that the local air quality degradation due to moving and idling trains is minimal in comparison to National Ambient Air Quality Standards (NAAQS), which have been established by EPA to protect public health and welfare. The additional analysis also showed that there would be minimal effects due to emissions of mobile source air toxics (MSATs) from locomotives.
- Section 2.11, Noise and Vibration, discusses additional analysis of the potential effects of noise on sensitive receptors and the potential effects of ground-borne vibration due to train traffic and project construction. SEA concluded that fleet maintenance and other mitigation requirements will minimize the effects of noise and vibration on sensitive land uses adjacent to the EJ&E rail line.
- Section 2.12, Biological Resources, presents the additional evaluation of the Hine's emerald dragonfly, Indiana bat, Karner blue butterfly, and other threatened and endangered species. SEA determined that the Proposed Action and transaction-related construction activities are not likely to adversely affect these species.
- Section 2.13, Cumulative Effects of Rail/Rail At-Grade Crossings on Hiway/Rail At-Grade Crossings, presents additional analysis that was conducted for other intersecting railroads, programmed highway projects, actions of the Illinois Commerce Commission, and the DP Partners LogistiCenter. SEA determined that there may be cumulative effects on vehicle delay and increased noise and vibration from the other intersecting railroads. SEA expects no cumulative effects from highway projects or actions of the Illinois Commerce Commission.
- Section 2.14, Corrections to the Draft EIS, updates the information that was presented in the Draft EIS.

2.1 Revised Matteson Connection

In their Application, CN proposed improving capacity along the EJ&E rail line by constructing six new connections for operational efficiency and approximately 19 miles of double track within existing ROW along certain rail segments. CN included conceptual engineering sketches of proposed capacity improvements and connections in the Application, and SEA used this information to estimate potential environmental effects in the Draft EIS. After the issuance of the Draft EIS, CN revised the proposed connection at Matteson, Illinois. According to CN, the revised connection would increase the maximum operating train speed along the EJ&E main line thus reducing traffic delay at several highway/rail at-grade crossings in the Matteson area.

Section 2.4 of the Draft EIS discusses the Proposed Matteson Connection as presented in CN's Application. SEA's evaluation of the Revised Matteson Connection in this Final EIS assessed potential adverse environmental effects for each of the 13 resource categories described in Chapter 4 of the Draft EIS. In the evaluation of the revised connection for Matteson, SEA determined that there would be no additional effects on Rail Safety, Hazardous Waste Sites, and Vibration. Resource categories affected by CN's Revised Matteson Connection are discussed below.

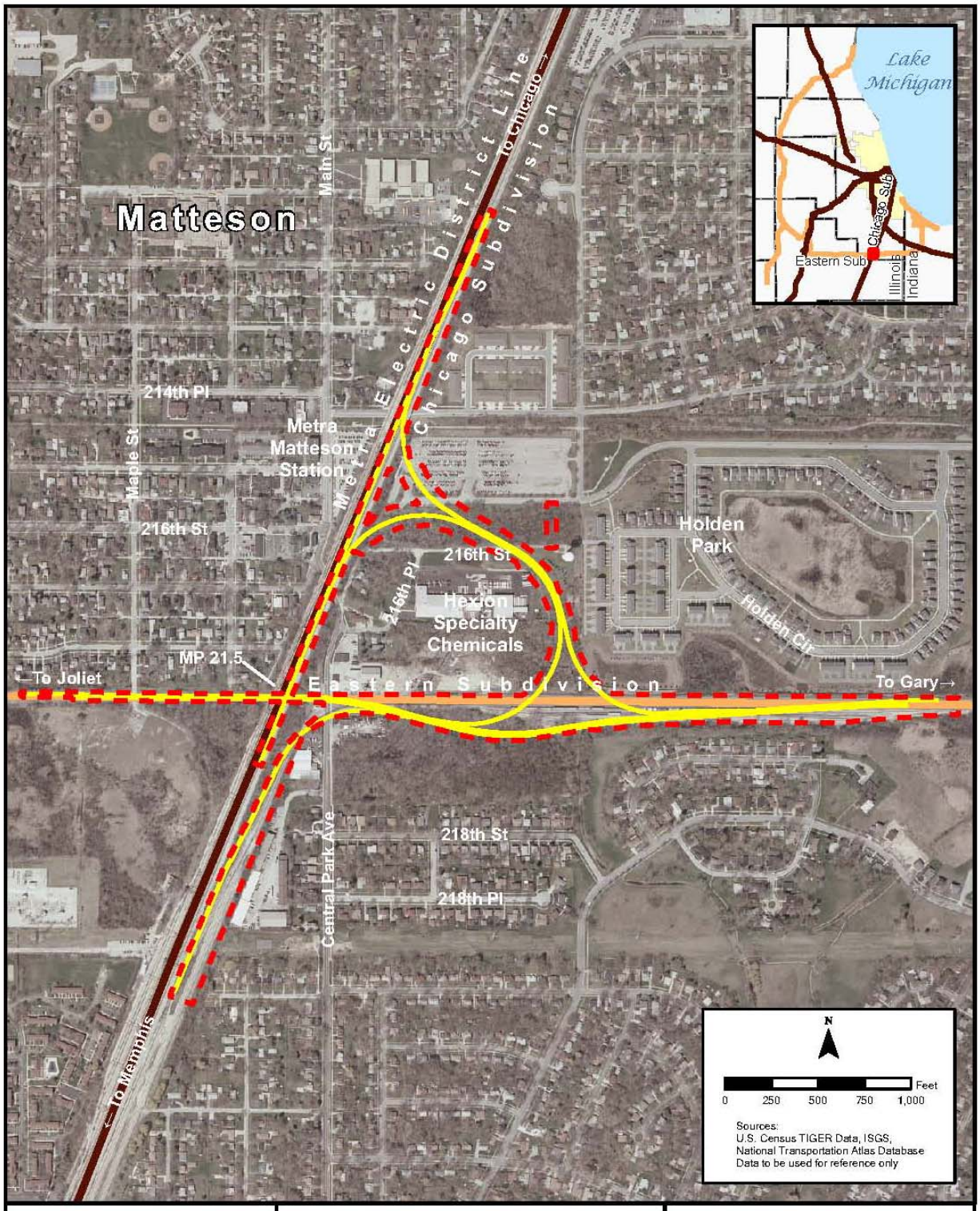
Based on its analysis, SEA concludes that the Revised Matteson Connection, with the mitigation recommended in Chapter 4 of this Final EIS, would not result in any significant environmental effects. Moreover, effects on Land Use, Socioeconomics, Environmental Justice, Energy, Air Quality, and Water Resources, would be less than the Proposed Matteson Connection presented in the Draft EIS.

2.1.1 Rail Operations

The proposed connection at Matteson, as presented by CN in their October 2007 Application, would have reduced the maximum operating speed along the EJ&E rail line from 45 mph to 25 mph. Consequently, after the Draft EIS was issued, CN revised the Matteson connection to permit a maximum operating speed of 40 mph on the EJ&E rail line. See Figure 2.1-1, Revised Matteson Connection, for more details. This modification would reduce vehicle delay at nearby highway/rail at-grade crossings, such as Cicero Avenue, Main Street, and Western Avenue.

2.1.2 Transportation

The potential effects of the Revised Matteson Connection on traffic delay for Cicero Road, Main Street, and Western Avenue are discussed in this Final EIS in Section 2.5, Updated Transportation Information.



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Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Construction Limits
Proposed Track

Figure 2.1-1
Revised
Matteson Connection

2.1.3 Land Use, Socioeconomics, Environmental Justice

SEA evaluated the potential for adverse effects resulting from the Revised Matteson Connection, as described in the sections below.

2.1.3.1 Land Use Conversions

The Revised Matteson Connection would require approximately 1.75 acres less than the proposed connection evaluated in the Draft EIS. Converted acreage is listed in Table 2.1-1.

Table 2.1-1. Revised Matteson Connection – Land Use Conversion Summary

Construction Site / Location	Existing Land Use	Acres to be Converted to Railroad Use	
		Proposed Matteson Connection* (acres)	Revised Matteson Connection (acres)
Matteson Connection / Matteson, Illinois	Industrial Open Space Vacant Residential	0.474 0.443 8.198 0.126	0.277 0.000 7.179 0.035
Total		9.241 acres	7.492 acres

* As recorded in the Draft EIS

2.1.3.2 Consistency with Existing Land Use Plans and Zoning

The Revised Matteson Connection would be consistent with future Matteson land use plans and zoning, and falls within a Service and Light Industrial District according to the Matteson Land Use Intensity Plan and current zoning map. In addition, CN has purchased a substantial portion of the Light Industrial District property where the revised rail connection would be located, east of the CN Chicago subdivision and north of EJ&E western subdivision. The Service and Light Industrial District land use designation would allow railroad/transportation land uses as they are already accommodated in this area of Matteson.

2.1.3.3 Socioeconomics

SEA evaluated the potential affects on the socioeconomic conditions surrounding the Revised Matteson Connection compared to the Proposed Matteson Connection. Table 2.1-2, below, outlines full and partial acquisitions by property type, and the total acquisition required for both the Revised and the Proposed Matteson Connections.

Table 2.1-2. Comparison of Property Acquisition

	Residential		Commercial		Industrial		Vacant		Acreage
	Full	Partial	Full	Partial	Full	Partial	Full	Partial	
Proposed Matteson Alternative	0	1	0	1	1	0	2	7	16.8
Revised Matteson Connection	0	0	0	1	1	0	1	8	13.3

SEA evaluated the potential effects on the socioeconomic conditions surrounding the Revised Matteson Connection. Changes in socioeconomic conditions from the Draft EIS are very minor and would not affect conclusions stated in the Draft EIS.

2.1.3.4 Environmental Justice

SEA evaluated the Revised Matteson Connection and determined it would not have a disproportionately high and adverse effect on minority and low-income populations regarding train noise and highway/rail at-grade crossing safety and delay.

2.1.4 Energy and Air Quality

2.1.4.1 Energy

The Revised Matteson Connection would allow rail traffic to move more efficiently than the Proposed Matteson Connection. However, energy savings would be slight, if any, on a system-wide basis in the Chicago metropolitan area and would have a negligible effect on rail system fuel use.

2.1.4.2 Air Quality

Because energy savings between the Revised and the Proposed Matteson Connections would be slight, air emissions changes would also be slight. Construction of the Revised Matteson Connection would result in a temporary and relatively small increase in construction-related emissions, compared to estimated construction emissions presented in the Draft EIS for the Proposed Matteson Connection. Those emissions were found to be clearly *de minimis*, or negligible, and the slight change in emissions resulting from the Revised Matteson Connection would also be *de minimis*.

2.1.5 Noise and Vibration

SEA assessed potential noise emissions from the Revised Matteson Connection to evaluate wayside noise (wheel/rail noise), noise from wheel flange squeal on sections of curved track (wheel squeal), and noise from train wheels rolling through crossovers (special track work). Noise from these three sources was combined to calculate an overall noise level. SEA used that information to determine the distance to the 65 dBA Ldn contour. Using GIS technology, SEA plotted noise contour lines around the connection and counted the number of noise-sensitive receptors predicted to experience noise levels of 65 dBA or greater on an Ldn basis. SEA also determined the number of noise-sensitive receptors predicted to experience noise levels of 70 dBA or greater. Table 2.1-3, below, illustrates the results.

Similarly, SEA assessed potential vibration associated with the revised connection, using Federal Transit Administration (FTA) methods and GIS technology. Table 2.1-3, below, illustrates results of the additional noise analysis and the number of vibration-sensitive receptors predicted to experience threshold levels of train-induced, ground-borne vibration associated with the Revised Matteson Connection. Receptor counts shown in Table2.1-3 do not include any receptors that are inside any other contour; the table presents receptors inside contours that are unique to these analyses.

Following the analysis, SEA determined that the Applicants' voluntary noise mitigation would be adequate to address the potential noise effects.

Table 2.1-3. Noise and Vibration Associated with the Revised Matteson Connection				
Revised Connection	Number of Receptors Predicted to Experience Threshold Levels			
	Noise Level			Vibration
	Existing 65 dBA Ldn	Future 65 dBA Ldn	Future 70 dBA Ldn	
Matteson	47	26	12	0

2.1.6 Biological Resources

The Proposed Matteson Connection would affect a total of 22.5 acres. The Revised Matteson Connection would result in an increase of 7.1 affected acres. The 29.6 acres of affected acres includes 20.2 acres currently in road, pavement, building, or railroad. The remaining 9.4 acres are dominated by a mix of immature forest and wet forest as well as other cultural land cover types. Forested areas comprise 3.3 acres of immature upland forest and 4.4 acres of wet forest. Other land cover types include: 1.0 acres of turf grass; 0.2 acres of ditched stream and associated bank, 0.3 acres of Reed Canary Grass and 0.2 acre of upland.

Section 4.11.3.2 in the Draft EIS details the construction effects for the Proposed Matteson Connection. The effects of the Revised Matteson Connection on plant communities and wildlife would be slightly greater than effects from the Proposed Matteson Connection. However, effects to wildlife would be minimal since the site is highly urbanized and habitat is currently fragmented.

2.1.7 Water Resources

The Proposed Matteson Connection could directly affect 3.62 acres of wetland. There would be a decrease of 0.68 acre of potential wetland effects with the Revised Matteson Connection (see Figure 2.1-3).

2.1.8 Cultural Resources

The Illinois State Historic Preservation Agency (IHPA) issued a concurrence letter stating there will be no adverse effects on cultural or historic resources as a result of the Proposed Action (see Appendix A).

If the Proposed Action is approved and if cultural resources are discovered during construction, the Applicants would coordinate with the State Historic Preservation Office (SHPO) and/or Tribal Historic Preservation Office (THPO), and other relevant consulting parties (under the Section 106 process) to develop and evaluate alternatives or modifications that would avoid, minimize, or mitigate any adverse effects on significant cultural resources.

Table 2.1-4, below, compares potential effects of both the Proposed and Revised Matteson Connection.

Table 2.1-4. Comparison of Effects – Proposed Matteson Connection and Revised Matteson Connection		
Resource Category	**Proposed Matteson Connection**	**Revised Matteson Connection**
Rail Operations	Curvature of rail connection limited the maximum operating speed along the EJ&E double track main line to 25 mph	Curvature of revised rail connection was modified to accommodate a maximum operating speed along the EJ&E double track main line to 40 mph
Rail Safety	There were no rail safety effects due to the Proposed Matteson Connection, as presented in the Draft EIS	No change from Proposed Matteson Connection
Transportation	Increase in traffic delay at Cicero Avenue, Main Street, and Western Avenue	Decrease in traffic delay from the Proposed Matteson Connection for Cicero Avenue, Main Street, and Western Avenue
Hazardous Waste Sites	High site ranking	No change from Proposed Matteson Connection
Land Use	9.24 acres to be converted to railroad use	7.49 acres to be converted to railroad use
Socioeconomics	16.8 acres of property to be acquired	13.3 acres of property to be acquired
Environmental Justice	No high or adverse effects and no disproportionate effects on minority and low-income populations	No change from Proposed Matteson Connection
Energy	Negligible effect on rail system fuel use	No change from Proposed Matteson Connection
Air Quality	Construction-related emissions would be minimal	Temporary and relatively small increase in construction-related emissions
Noise	Existing 65 dBA Ldn – 0 receptors Future 65 dBA Ldn – 0 receptors Future 70 dBA Ldn – 0 receptors	Existing 65 dBA Ldn – 47 receptors Future 65 dBA Ldn – 26 receptors Future 70 dBA Ldn -12 receptors
Vibration	3 receptors	0 receptors
Biological Resources	22.5 acres of ground disturbance No effect on wildlife	29.6 acres of ground disturbance and slightly greater effect on wildlife than Proposed Matteson Connection; however, effects to wildlife would be minimal since the site is highly urbanized and habitat is currently fragmented
Water Resources	Directly affecting 3.62 acres of wetland	Directly affecting of 2.94 acres of wetland
Cultural Resources	No adverse effects on cultural or historic resources	No adverse effects on cultural or historic resources

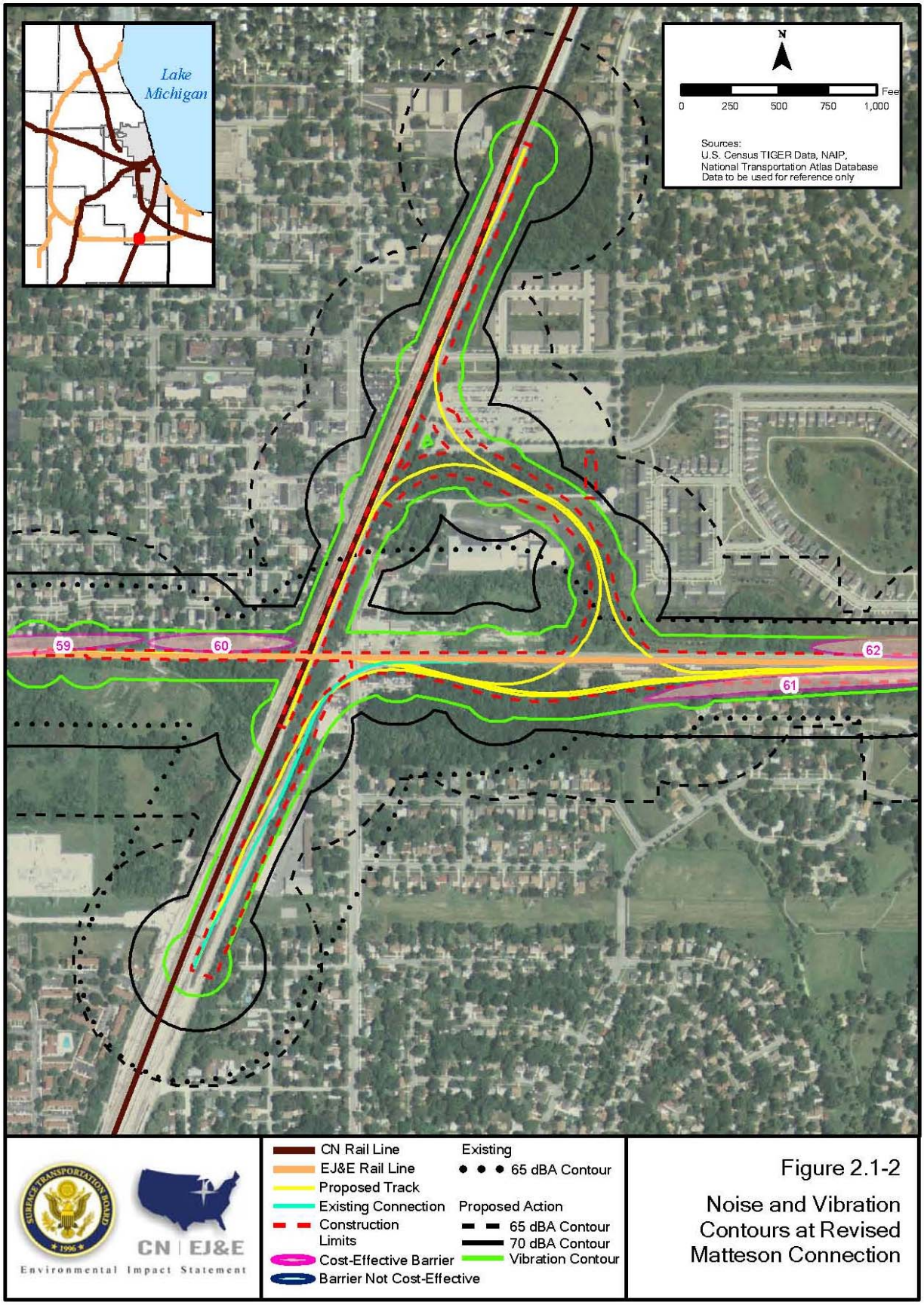
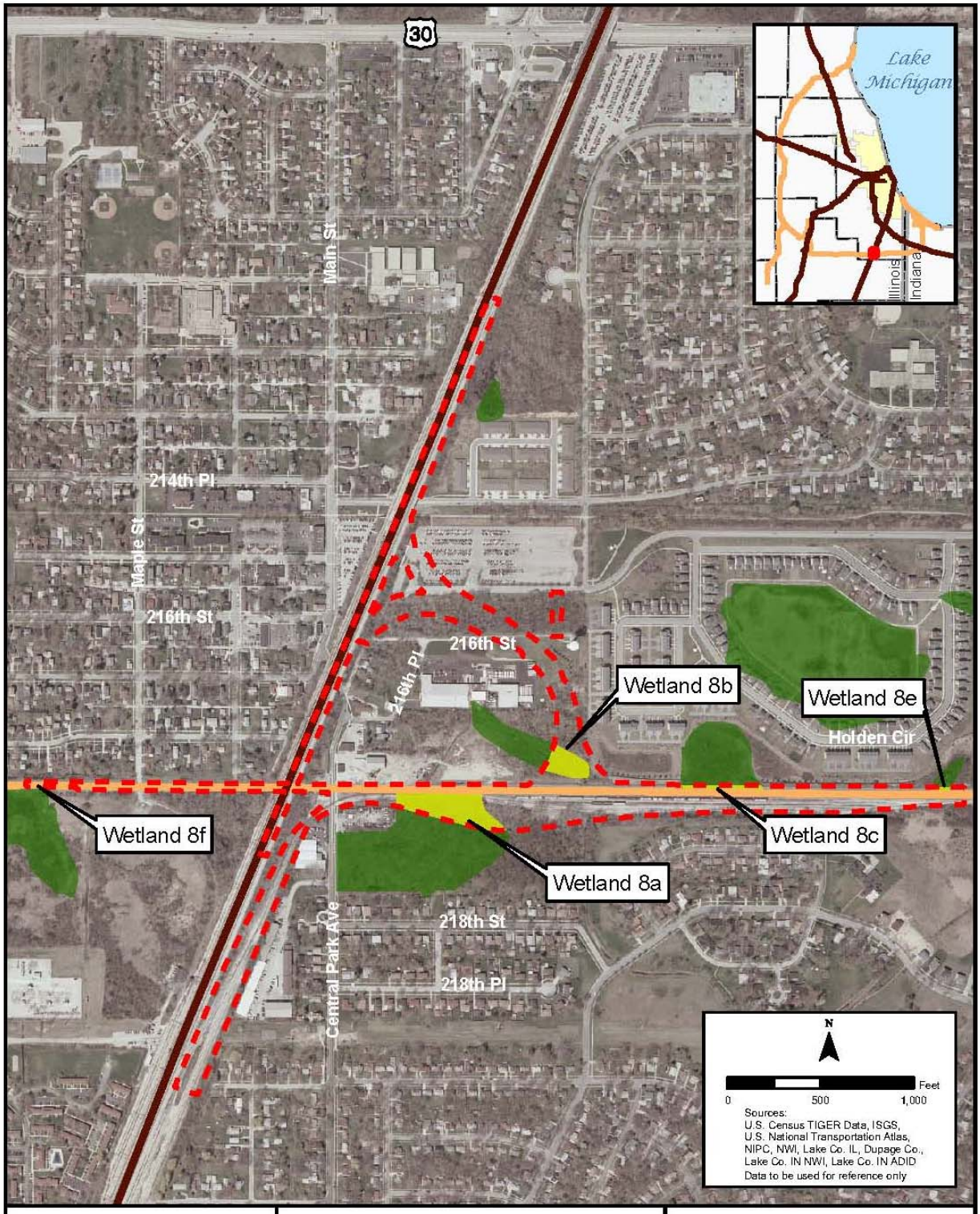


Figure 2.1-2

Noise and Vibration Contours at Revised Matteson Connection



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Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Construction Limits
Wetland
Affected Wetland

Figure 2.1-3
Revised
Matteson Connection
Potential Wetland Effects

2.2 Revised Double Track – Leithton Connection

In their operating plan the Applicants proposed to improve capacity on the EJ&E rail line by adding a second main line or double track in certain locations. One of the locations proposed by the Applicants was at the existing connection between the EJ&E rail line and the CN Waukesha Subdivision at Leithton, near Mundelein, Illinois. Conceptual engineering drawings of the Proposed Double Track – Leithton Connection to improve freight capacity were included in CN's October 2007 Application, and were used in the Draft EIS to estimate potential environmental effects. After the issuance of the Draft EIS, CN revised the proposed double track connection at Leithton (Revised Double Track – Leithton Connection) to improve the maximum operating train speed along the EJ&E main track and reduce the effect on vehicle traffic delay at several highway/rail at-grade crossings in the Mundelein area.

Section 2.2.2 of the Draft EIS discussed the Proposed Double Track – Leithton Connection as presented in CN's Application. As discussed below, in the evaluation of the Revised Double Track – Leithton Connection for this Final EIS, SEA has determined that there would be potential adverse environmental effects for each of the 13 resource categories in Chapter 4 of the Draft EIS. In the evaluation of the Revised Double Track – Leithton Connection, SEA determined that there would be some beneficial environmental effects and that there would be no additional adverse effects on Rail Safety, Hazardous Waste Sites, and Vibration.

2.2.1 Rail Operations

The plan for the Revised Double Track – Leithton Connection involves the construction of a new double track connection and the removal of an existing single track connection between the EJ&E rail line and the CN Waukesha Subdivision lines. The Applicants revised the initial design to create a turning curve radius that would allow higher train speeds at this connection. To accommodate the new double track connections, the Applicants have proposed a footprint up to 100 feet wide.

The Draft EIS discussed how the Proposed Double Track – Leithton Connection would improve the capacity of the existing connection by installing a second main track adjacent to the existing track, where the existing curvature of 11.5 degrees allows a maximum operating speed of 15 mph. Because most CN trains would use the Leithton connection to link its Waukesha Subdivision with EJ&E's Western Subdivision, the proposed design speed would result in slower maximum speeds for trains being routed to the EJ&E rail line.

The Revised Double Track – Leithton Connection relocates the existing connecting track and the proposed second main track to the west to create a maximum curvature of 7.25 degrees. This would allow a maximum train speed of 25 mph (see Figure 2.2-1, Revised Double Track – Leithton). Given the location of the 25 mph connecting track, train speeds over nearby highway/rail at-grade crossings (including Allanson Road, Diamond Lake Road, and IL 60/83) would be greatly improved.

2.2.2 Transportation

The potential effects that the Revised Double Track – Leithton Connection would have on traffic delay for Allanson Road, Diamond Lake Road, and IL 60/83 are discussed in Section 2.5, Updated Transportation Information.

2.2.3 Land Use, Socioeconomics, Environmental Justice

SEA evaluated the potential for adverse effects resulting from the Revised Double Track–Leithton Connection.

2.2.3.1 Land Use Conversions

The Revised Double Track–Leithton Connection would require approximately 1.8 more acres of industrial and open space land than the connection proposed in the Draft EIS. The converted land use is shown on Table 2.2-1.

Table 2.2-1. Revised Double Track - Leithton Connection - Land Use Conversion Summary

Construction Site / Location	Existing Land Use	Acres to be Converted to Railroad Use	
		Proposed Leithton Connection (acres)	Revised Leithton Connection (acres)
Leithton Connection / Near Mundelein, Illinois	Industrial	0.219	0.351
	Vacant	0.998	0.738
	Open Space	0.000	1.969
Total		1.217 acres	3.058 acres

2.2.3.2 Consistency with Land Use and Zoning

The Revised Double Track – Leithton Connection would be consistent with future Mundelein land use plans and zoning. The Mundelein, Illinois Southside Commercial Corridor Plan and Framework Plan, includes the area of the rail connection on Leithton. In the Southside Commercial Corridor Plan, both future land use and zoning in the area adjacent to the rail connection are shown as M-1 or Medium Industrial District. This industrial land use and zoning designation would allow a railroad/transportation use as proposed in the Revised Double Track – Leithton Connection.

2.2.3.3 Socioeconomics

SEA evaluated the potential effects on the socioeconomic conditions surrounding the Revised Double Track – Leithton Connection compared to the Proposed Double Track – Leithton Connection. Table 2.2-2, below, outlines full and partial acquisitions by property type and the total acquisition required for the Revised Double Track – Leithton Connection, under which, one property would change from partial acquisition to full acquisition. The property is vacant industrial land and acquiring it is not expected to cause any adverse effect to the economy. The partial-take of the trucking company parking area would not have an adverse effect on the company's daily operations or revenue.

No additional structures would need to be acquired for the Revised Double Track – Leithton Connection and the change in cost would be minimal.

SEA evaluated the potential effects on the socioeconomic conditions surrounding the Revised Double Track – Leithton Connection. Changes in socioeconomic conditions from the Draft EIS are very minor and would not affect conclusions stated in the Draft EIS.

Table 2.2-2. Comparison of Proposed and Revised Double Track - Leithton Connection Property Acquisition

	Residential		Commercial		Industrial		Vacant		Acreage
	Full	Partial	Full	Partial	Full	Partial	Full	Partial	
Proposed Leithton Connection	0	0	0	0	0	3	0	8	3.8
Revised Leithton Connection	0	0	0	0	0	4	1	7	5.4

2.2.3.4 Environmental Justice

SEA evaluated the potential for adverse effects on minority and low-income populations resulting from the Revised Double Track – Leithton Connection and determined there would not be disproportionately high effects from train noise or highway/rail at-grade crossing safety and delay.

2.2.4 Energy and Air Quality

2.2.4.1 Energy

The Revised Double Track – Leithton Connection would allow rail traffic on affected segments to move more efficiently. Energy savings would be slight, if any, on a system-wide basis in the Chicago metropolitan area, and would have a negligible effect on rail system fuel use.

2.2.4.2 Air Quality

Construction of the Revised Double Track – Leithton Connection would result in a temporary and relatively small increase in construction-related emissions, compared to the estimated construction emissions presented in the Draft EIS for the Proposed Double Track – Leithton Connection. The emissions were found to be clearly *de minimis*, or negligible, and the slight change in emissions resulting from the Revised Leithton Connection would also be *de minimis*.

2.2.5 Noise and Vibration

SEA assessed potential noise emissions from the Applicant's Revised Double Track - Leithton Connection to evaluate wayside noise (wheel/rail noise), noise from wheel flange squeal on sections of curved track (wheel squeal), and noise from train wheels rolling through crossovers (special track work). Noise from these three sources was combined to calculate an overall noise level. SEA used that information to determine the distance to the 65 dBA Ldn contour. Using GIS technology, SEA plotted noise contour lines around the connection and counted the number of noise-sensitive receptors predicted to experience noise levels of 65 dBA or greater on an Ldn basis. SEA also determined the number of noise-sensitive receptors predicted to experience noise levels of 70 dBA or greater. Table 2.2-3, below, illustrates the results.

Similarly, SEA assessed potential vibration associated with the revised connection, using FTA methods and GIS technology. Table 2.2-3, below, illustrates results of the additional noise analysis and the number of vibration-sensitive receptors predicted to experience threshold levels of train-induced, ground-borne vibration associated with the Revised Leithton Connection. Receptor counts shown in Table 2.2-3 do not include any receptors that are inside any other contour; the table presents receptors inside contours that are unique to these analyses. Figure 2.2-2 documents the noise contours associated with this analysis.

The Revised Double Track – Leithton Connection does not have an effect on the number of noise-sensitive receptors or vibration.

Table 2.2-3. Noise and Vibration Associated with the Revised Double Track - Leithton Connection				
Revised Connection	Number of Recptors Predicted to Experience Threshold Levels			
	Noise Level			Vibration
	Existing 65 dBA Ldn	Future 65 dBA Ldn	Future 70 dBA Ldn	
Leithton	0	0	0	0

2.2.6 Biological Resources

The Revised Double Track – Leithton Connection shifts the alignment from the existing rail bed to the north and west to provide a wider turning radius. The Proposed Double Track – Leithton Connection would create ground disturbance on a total of 4.9 acres. The Revised Double Track – Leithton Connection would create an additional 2.1 acres of ground disturbance compared with the Proposed Double Track - Leithton Connection. There would be a direct alteration of less than 0.1 acre of ditched area, 1.7 acres of disturbed landscape dominated by young woody growth, 0.2 acre of disturbed shrub swamp, 1.9 acre of *Phragmites*/cattail monotype wetlands and 0.7 acre of open water – or 4.6 acres of direct effects. Section 4.11.3.2 in the Draft EIS details the construction effects for the Proposed Double Track – Leithton connection.

The effects of the Revised Double Track – Leithton Connection on plant communities and wildlife would be slightly greater than effects from the Proposed Double Track – Leithton Connection. However, effects to wildlife would be minimal since the site is surrounded by existing development that has isolated it from nearby habitats.

2.2.7 Water Resources

The Proposed Double Track – Leithton Connection would directly affect 2.44 acres of wetland, as presented in the Draft EIS. The Revised Double Track – Leithton Connection would increase the amount of wetland effects by 0.64 acres to a total of 3.08 acres (see Figure 2.2.3).

2.2.8 Cultural Resources

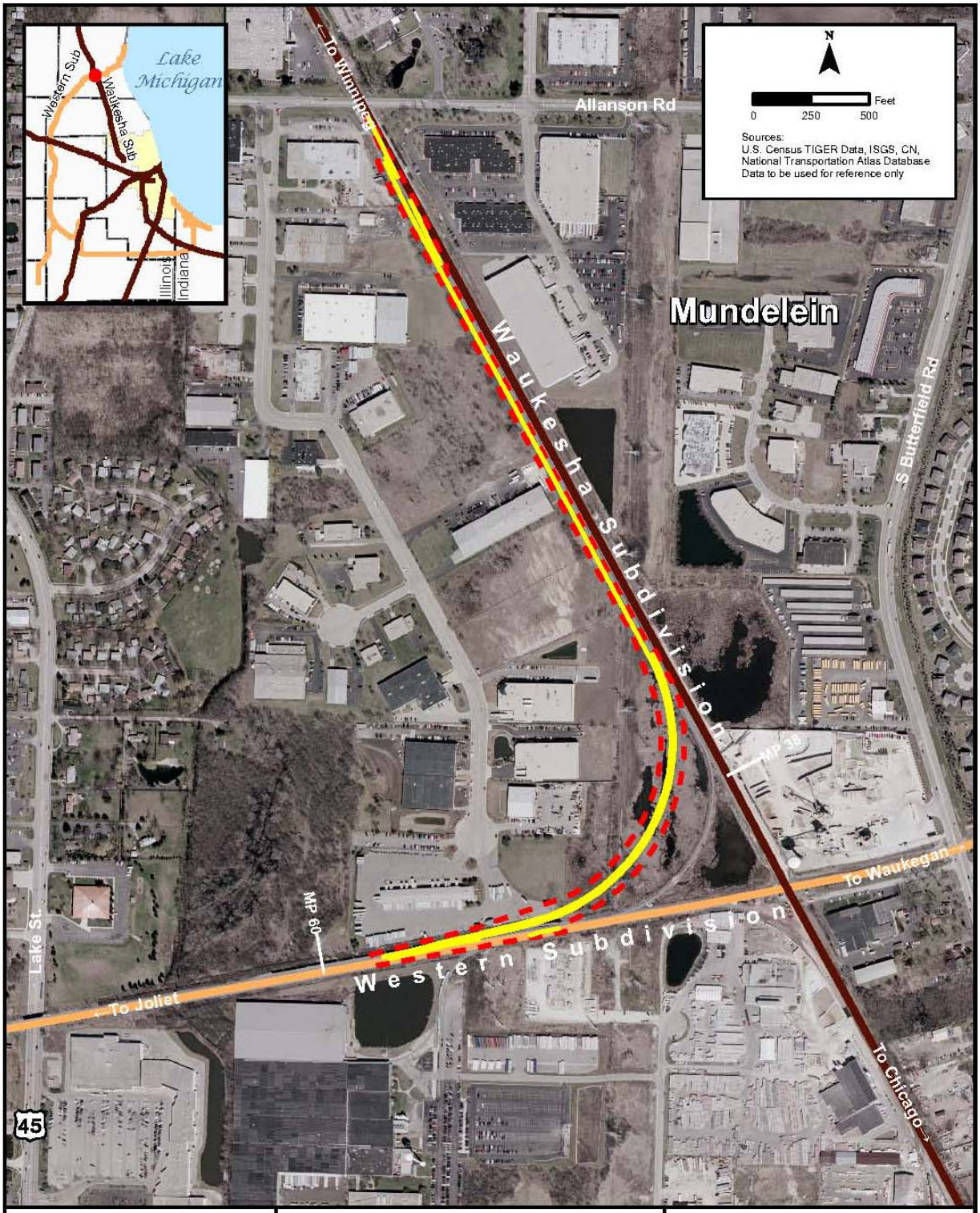
SEA completed cultural resource surveys for the area of potential effect (APE) associated with the Proposed Double Track - Leithton Connection and the Revised Double Track – Leithton Connection. The Indiana Division of Historic Preservation and Archaeology issued a letter of concurrence stating there would be no adverse effects on cultural or historic resources as a result of the Proposed Action (see Appendix A). If cultural resources are discovered during construction, the Applicants would coordinate with SHPO and/or THPO, and other relevant consulting parties (under the Section 106 process) to develop and evaluate alternatives or modifications that would avoid, minimize, or mitigate any adverse effects on significant cultural resources.

2.2.9 Other Connections

The proposed connections at Munger, Illinois; Joliet, Illinois; Griffith, Indiana; Ivanhoe and Kirk Yard, near Gary, Indiana, remain as presented in the Draft EIS. Therefore, SEA has determined that for these connections no additional analysis is required. The results of the environmental analysis for the 13 resource categories for these connections, and the alternatives, are presented in Chapter 4 of the Draft EIS. Table 2.2-4, below, compares potential effects of both the Proposed and Revised Double Track – Leithton Connections.

Table 2.2-4. Comparison of Effects–Proposed Double Track - Leithton Connection and Revised Double Track - Leithton Connection

Resource Category	Proposed Double Track - Leithton Connection	Revised Double Track - Leithton Connection
Rail Operations	Curvature of the rail connection limited the train speed along the connection to 15 mph	Revised curvature of the rail connection would allow a maximum train speed of 25 mph; therefore increasing train speeds along the main track as well
Rail Safety	There were no rail safety effects due to the Proposed Double Track - Leithton Connection, as presented in the Draft EIS	No change from the Proposed Double Track - Leithton Connection
Transportation	Increase in traffic delay at Allanson Road, Diamond Lake Road, and IL 60/83	Decrease in traffic delay at Allanson Road, Diamond Lake Road, and IL 60/83
Hazardous Waste Sites	High site ranking for most properties	No change from the Proposed Double Track - Leithton Connection
Land Use	1.22 acres to be converted to railroad use	3.06 acres to be converted to railroad use
Socioeconomics	3.8 acres of property to be acquired	5.4 acres of property to be acquired
Environmental Justice	No high or adverse effects or disproportionate effects on minority or low-income populations	No change from Proposed Double Track - Leithton Connection
Energy	Negligible effect on rail system fuel use	No change from Proposed Double Track - Leithton Connection
Air Quality	Construction-related emissions would be minimal	Temporary and relatively small increase in construction-related emissions
Noise	Existing 65 dBA Ldn - 0 receptors Future 65 dBA Ldn - 0 receptors Future 70 dBA Ldn - 0 receptors	Existing 65 dBA Ldn - 0 receptors Future 65 dBA Ldn - 34 receptors Future 70 dBA Ldn -0 receptors
Vibration	0 receptors	No change from Proposed Double Track - Leithton Connection
Biological Resources	4.9 acres of ground disturbance No effect on wildlife	7.0 acres of ground disturbance and slightly greater effect on wildlife than Proposed Double Track - Leithton Connection; however, effects to wildlife would be minimal since the site is surrounded by existing development that has isolated it from nearby habitats
Water Resources	Directly affecting 2.44 acres of wetland	Directly affecting of 3.08 acres of wetland
Cultural Resources	No adverse effects on cultural or historic resources	No change from Proposed Double Track - Leithton Connection



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Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Construction Limits
Proposed Track

Figure 2.2-1
Revised Double Track - Leithton

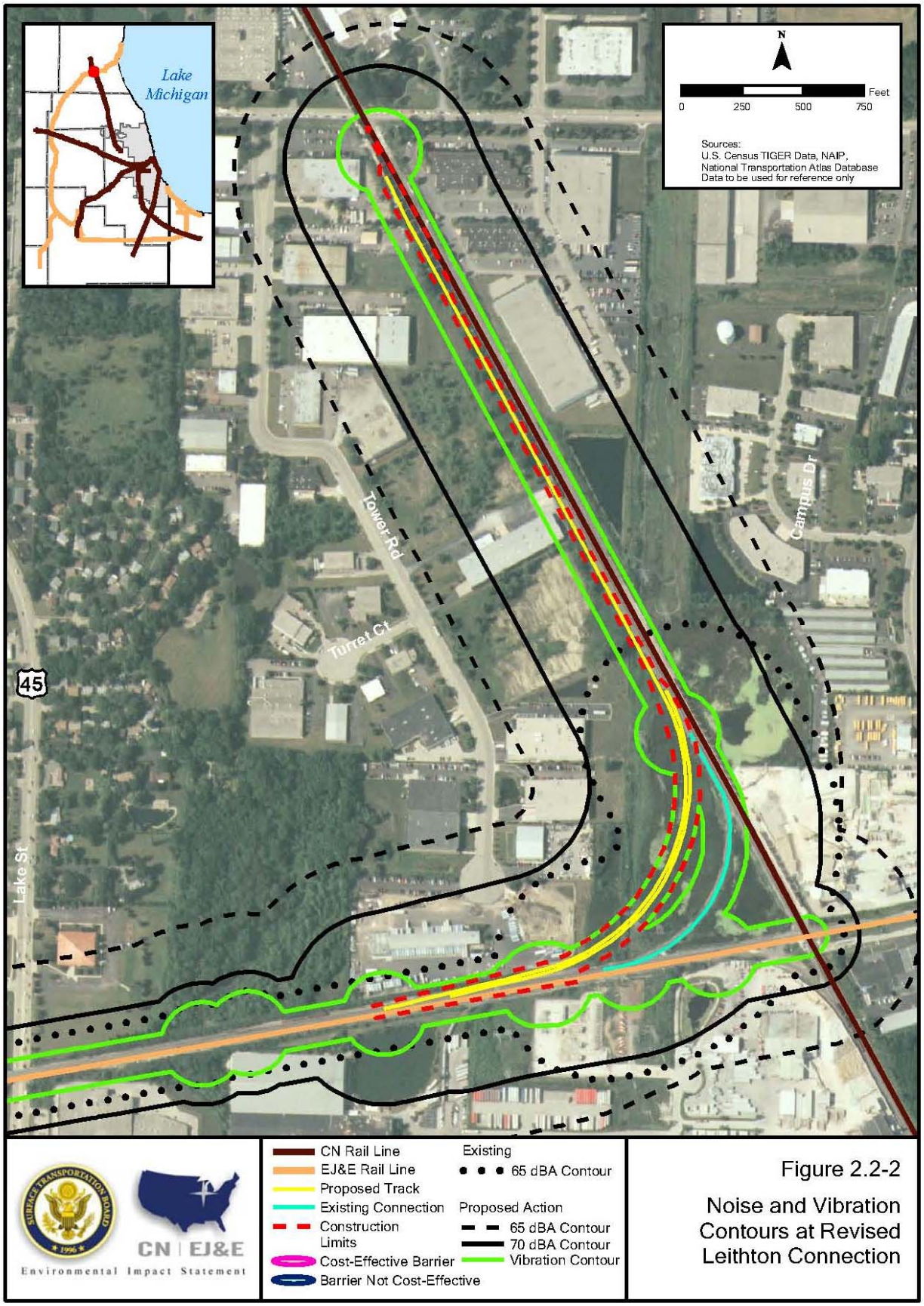
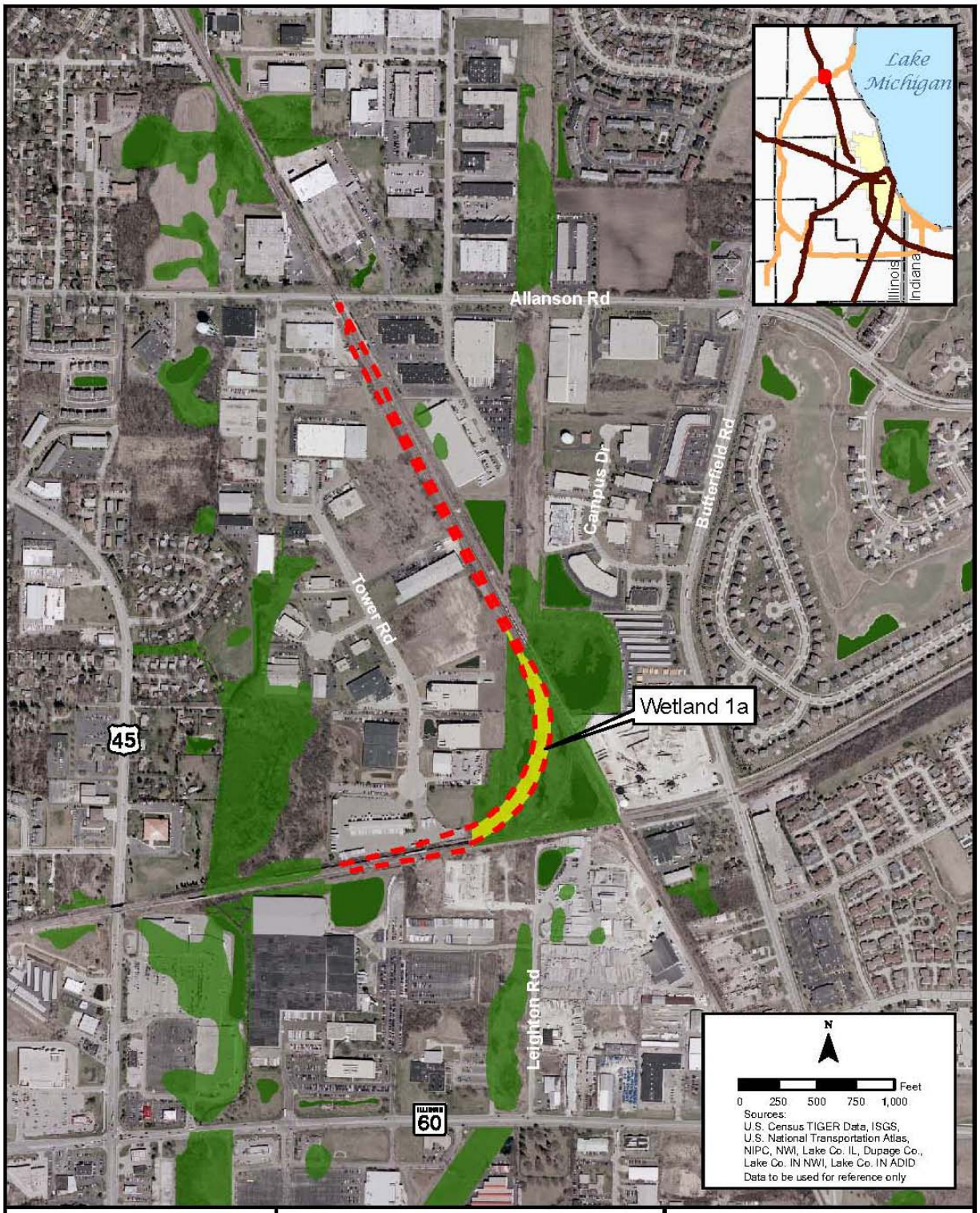


Figure 2.2-2

Noise and Vibration Contours at Revised Leithton Connection



CN | EJ&E
Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Construction Limits
Wetland
Affected Wetland

Figure 2.2-3
Revised Double Track
-Leithton
Potential Wetland Effects

2.3 Commuter Rail Service

2.3.1 Proposed Metra STAR Line Service

In the Draft EIS, Sections 3.1.3.1 and 4.1.7.3, SEA discussed and evaluated the potential effect of the Proposed Action on the proposed Metra commuter rail system known as the STAR Line (Suburban Transit Access Route). Metra is currently evaluating the feasibility of the STAR Line under a grant from the Federal Transit Administration (FTA). In the Draft EIS, SEA concluded that the Proposed Action would not adversely affect potential implementation of the STAR Line concept as described by Metra. SEA received numerous comments on its conclusions with respect to the STAR Line. Metra, in its comment letter dated September 29, 2008, stated that SEA's "statement is not entirely correct." Metra based this conclusion on the potential cost of the additional capacity improvements that would be required to implement the proposed Metra STAR Line and on the nature and history of Metra's working relationship with CN. Other comments on the conclusions in the Draft EIS were based on the impression that Metra would not need to add any additional rail infrastructure in order to implement the STAR Line service. Many commenters took the position that the Proposed Action would render the STAR Line infeasible. Several commenters pointed out that Metra's proposed STAR Line has a number of serious technical and financial obstacles to overcome before it becomes a reality and, for those reasons, argued that SEA should not have considered it reasonably foreseeable.

Based on these comments, SEA undertook additional analysis of the possible effect of the Proposed Action on Metra's ability to implement the proposed STAR Line service. The additional analysis allowed SEA to compare the likely cost of the infrastructure that would be required for the STAR Line under the No-Action Alternative (existing EJ&E freight train activity only) to the likely cost of the infrastructure that would be required for STAR Line if the Board approves the Proposed Action. While SEA has undertaken this additional analysis, SEA notes that implementation of the STAR Line is contingent on numerous issues that are totally unrelated to the Proposed Action (for example technical issues associated with the Northwest Corridor Segment). Moreover, SEA understands that a formal agreement, or Memorandum of Understanding, has not been executed between Metra and EJ&E. SEA's analysis first determined all of the additional infrastructure that the various Metra studies indicated would be required for the STAR Line service. SEA then developed multiple scenarios of rail infrastructure improvements, and modeled the response of the EJ&E rail line and the Metra STAR Line service to determine what type of additional infrastructure would be required under the Proposed Action in order to operate the STAR Line. Appendix A provides more detail on SEA's STAR Line analysis.

2.3.1.1 Metra STAR Line Background

Metra is currently preparing an Alternatives Analysis under the FTA process. Metra, in a letter dated January 14, 2008, provided SEA with preliminary draft portions of the Metra STAR Line Alternatives Analysis; "Feasible Alternatives: Detailed Descriptions" dated November 13, 2007. Metra also provided SEA with a preliminary weekday passenger train schedule that includes 52 total passenger trains on the EJ&E segment. These trains are proposed to operate on 30-minute peak hour and 60-minute non-peak hour schedules. Metra previously completed the Outer Circumferential Commuter Rail Feasibility Study (T.Y. Lin International 1999) and the STAR Line (Suburban Transit Access Route) Feasibility Study for a Metra Commuter Rail Service System (Metra 2003). Key points provided in these documents have formed the basic framework for SEA's additional analysis.

The Metra studies conducted to date identified the capital improvements that would be necessary in order to implement the STAR Line service on the EJ&E rail line under existing conditions. SEA views these improvements as Scenario No. 1, or the No-Action alternative. To date, none of the Metra studies include a detailed capacity study (a computer-based dispatch study which models the

existing rail corridor with expected freight trains and proposed passenger trains). This capacity study would identify the locations of potential freight and passenger train conflicts. It would also help to confirm the extent of capital improvements that would be needed to safely, efficiently, and reliably handle both freight and passenger trains. Typically, a capacity study would be performed by the sponsoring agency (Metra) with the aid of the host railroad at a later stage in the feasibility studies. The results of a capacity study are usually described in terms of average operating speed or delay ratio and, once acceptable levels of these results are agreed upon, form the basis of an agreement between the freight owner and passenger train operator. Should the Board approve the Proposed Action and Metra proceed with the STAR Line development, then Metra and CN would ultimately have to agree on a number of operating issues, including a program of capital improvements.

2.3.1.2 Metra STAR Line Analysis

Using information provided in the Metra documents referenced above, SEA identified four possible capital improvement and operating scenarios under which Metra could implement STAR Line service. SEA developed Scenarios No. 1, 2, and 3, assuming that freight and passenger trains would or could use the same trackage. The only exception to this assumption is the proposed flyover at West Chicago over the Union Pacific/Metra Line. Metra has indicated that the flyover could potentially be required, and SEA assumed that the flyover would be designed with steep gradients to minimize costs, and therefore, would be a passenger-train only structure. SEA developed Scenario No. 4 as a "stand-alone" commuter network which SEA determined could be constructed within the EJ&E ROW. Because none of the Metra studies include a detailed capacity study, SEA used the Rail Traffic Controller (RTC) Dispatch Model that SEA developed as part of the verification of the Applicants' Operating Plan (see Appendix B of the Draft EIS). SEA evaluated the operations of each of the scenarios to determine if the scenario would provide an acceptable level of passenger rail and freight rail service. Appendix A of this Final EIS contains the details on SEA's additional analysis. SEA evaluated the following scenarios for the operation of the STAR Line service.

- Scenario No. 1 – STAR Line base line infrastructure was evaluated with two different train operating schedules:
    - Scenario No. 1A – STAR Line trains and existing EJ&E trains (no acquisition)
    - Scenario No. 1B – STAR Line trains and Proposed Action freight trains (both CN and EJ&E freight trains)
- Scenario No. 2 – Infrastructure includes the addition of a third main track between Eola and Walker (near Plainfield, Illinois) to the trains under Scenario 1B, above
- Scenario No. 3 – Infrastructure includes the addition of a third main track between Walker and Renwick Road to the trains under Scenario 1B, above
- Scenario No. 4 – Stand-alone commuter rail option was created to analyze an option that avoids, to the extent possible, the interference between freight and passenger trains

For this analysis, SEA assumed that the outstanding/existing agreements that govern the movement of EJ&E freight trains during the morning and evening peak periods would be honored, consistent with the Applicants' voluntary mitigation measure VM 41. These agreements would help to minimize the possibility that existing Metra commuter trains (not the future STAR Line trains) that cross at the four rail/rail at-grade crossings (interlockings) would be delayed if the Board approves the Proposed Action. SEA recognizes that only two interlockings are located within the STAR Line corridor; however, two interlockings located just outside the corridor (Barrington to the north and East Joliet-Rock Island Tower to the south) effect the operation of freight trains and thus SEA included these additional interlockings in the operational analysis.

RTC Dispatch Modeling Results

Table 2.3-1 displays the results of the analysis of the four Alternatives described above and compares these results with those presented in the Draft EIS (Proposed Action).

Table 2.3-1 Delay Ratios by Scenario

Scenario	Delay Ratio	
	CN+EJ&E	STAR Line
Proposed Action	69.7[a]	N/A
Scenario No. 1A	13.0	12.6
Scenario No. 1B	Unacceptable	Unacceptable
Scenario No. 2	40.5	10.5
Scenario No. 3	38.5	8.0
Scenario No. 4	N/A [b]	2.6

Notes:

[a] The Draft EIS, Table B4-4, shows this value as 58 percent, SEA recalculated the delay ratio to include the commitment made by the Applicants in voluntary mitigation measure VM 41 related to the operating restrictions imposed by the agreements with Metra.

[b] Scenario No. 4 is the stand-alone alternative under which all Metra trains would be operated independent of CN's trackage and vice versa. Therefore, no operations data was generated for CN's traffic under this scenario.

Scenario No. 2 produced performance results for STAR Line trains roughly comparable to Scenario No. 1A and freight train performance results were better than the Proposed Action. This indicates that the infrastructure improvements contemplated under Scenario No. 2 would provide an acceptable level of service (LOS) for both passenger and freight trains. Scenario No. 3 also produced an acceptable LOS, however, the overall service level is comparable to Scenario No. 2. The stand-alone option, Scenario No. 4, contemplates no freight train interference and shows the best results for the STAR Line trains.

Cost Estimates for Each Scenario

For each of the STAR Line scenarios studied, SEA generated a conceptual cost estimate shown in Appendix A3 (Table 3) of this Final EIS (see Table 2.3-2, below). As part of the Proposed Action, the Applicants plan to construct a new second main line track, which when combined with the existing sidings at East Siding, Normantown, and Walker, would give CN approximately 10 miles of double track in the area. This cost estimate assumed that, should the Board approve the Proposed Action, CN would be responsible for the cost of this portion of new second main line, since it would be built regardless of whether STAR Line service is implemented. In addition, because Metra has indicated that the STAR Line route would need to be grade-separated from the Union Pacific/Metra line at West Chicago, SEA included the cost of a flyover at West Chicago in each scenario. Also, the cost to install level boarding as desired by the FTA was included in all scenarios. Appendix A of this Final EIS provides more details on the assumptions that SEA used for each scenario.

SEA estimated that the cost of Scenario 1A (no acquisition) would be approximately $419 million (this is based on Metra's 2003 cost as adjusted for inflation). This estimate represents the cost for the additional infrastructure that Metra has indicated would be required to implement the STAR Line on only the EJ&E portion of the STAR Line route. It also assumes that the Board does not approve the Proposed Action and that no additional EJ&E traffic (as described in the Applicants' 2007 submittal)

would occupy the existing infrastructure. Cost estimates include additional infrastructure required (capacity improvements) to implement the STAR Line should the Board approve the Proposed Action, and the projected changes in rail freight traffic are implemented. SEA concluded that under the Proposed Action, the cost of additional infrastructure would increase by approximately $9.5 million (about 2.3 percent) of EJ&E's portion of the overall STAR Line cost. It should be noted that SEA's analysis does not include the potential cost of purchasing additional operating ROW for any of the scenarios.

Table 2.3-2. SEA's Cost Estimates for the STAR Line Implementing Scenarios

	Cost in thousands of dollars (2008)				
	CN	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Total Project Cost	$43,872	$419,004	$472,397	$500,254	$499,711
Less Work Completed by CN			$43,872	$43,872	[a]
Net Project Cost (to Metra)			$428,526	$456,383	$499,711
Incremental Cost Above Scenario No,1 ($)			$9,522	$37,379	$80,708
Incremental Cost Above Scenario No.1 (percent)			2.3%	8.9%	19.3%

Notes:

- Possible Metra Costs
- CN costs per Application

[a] Not applicable under Scenario 4 because track costs assigned to CN for freight service would not benefit Metra's Stand-alone Alternative for commuter service.

2.3.1.3 STAR Line Direct Effects Conclusions

SEA evaluated the possible implementation of Metra's proposed STAR Line in Section 4.1.7.3 of the Draft EIS, and concluded that the STAR Line was a reasonably foreseeable future action, but that the Proposed Action would not adversely affect the potential implementation of the STAR Line service on the EJ&E rail line. In response to comments on the Draft EIS, SEA undertook additional analysis and confirmed that with some additional track infrastructure, it would be feasible for Metra and CN to jointly operate freight and commuter passenger service on the EJ&E rail line, similar to the way that Metra coexists with several other freight railroads in the Chicago region. SEA estimates that the added infrastructure to allow for the STAR Line service would potentially add only a nominal amount (between 2 and 9 percent) to the capital cost of the EJ&E segment of the proposed STAR Line. For these reasons SEA concludes that the Proposed Action would not have a substantial adverse affect on the potential implementation of the STAR Line service on the EJ&E rail line.

2.3.1.4 STAR Line Cumulative Effects Conclusions

In Sections 5.5.1 and 5.5.2 of the Draft EIS, SEA assessed the cumulative effects of the portion of the STAR Line proposed to operate along the EJ&E rail line. SEA's assessment included the cumulative effects of the proposed commuter stations along the EJ&E rail line. SEA concluded that operation of the STAR Line could cause cumulative effects on safety, vehicle delay, public lands, trails, emergency response, noise and vibration, socioeconomics, biological resources and water resources. SEA concluded that the cumulative effects of construction of the STAR Line would vary based on whether a separate track would be needed to accommodate STAR Line trains. However, SEA noted it could not be more specific regarding the potential severity of cumulative effects because specific Metra plans were not available.

SEA received many comments on the Draft EIS concerning the potential effects the Proposed Action could have on Metra's plans for the STAR Line. Therefore, as previously outlined in Section 2.3.1, SEA analyzed different scenarios related to construction and operation of the STAR Line along the EJ&E rail line to identify potential positive and negative aspects, including the costs, of each. Based on that analysis, SEA reviewed its earlier assessment of the potential cumulative effects related to construction and operation of the STAR Line. This review of the assessment did not include cumulative effects from construction and operation of commuter stations and related facilities because no new information on the facilities was available. With the caveat that Metra could change its plans for the STAR Line at any time, and would have to conduct its own environmental review before construction could begin, SEA's additional analyses of potential cumulative effects related to the STAR Line are described below.

Highway/Rail At-Grade Crossing Safety

If the Proposed Action were approved and the STAR Line became operational, approximately 40 EJ&E highway/rail at-grade crossings would see up to 25 additional CN and approximately 52 STAR Line trains. Many of these highway/rail intersections would be crossed by additional trackage, depending on Metra's choice of construction scenarios. The addition of new trackage through at-grade crossings would increase the risk of vehicle/train collisions. The Illinois Commerce Commission presumably would address such risks by requiring appropriate warning device upgrades and other modifications. Construction of a STAR Line flyover at West Chicago, which could potentially be a part of Metra's plan, should eliminate cumulative effects on safety at that highway/rail at-grade crossing.

Rail/Rail At-Grade Crossing Safety

Assuming construction of a STAR Line flyover at West Chicago, the only rail/rail at-grade crossing that would experience additional trains as a result of the Proposed Action and the STAR Line would be at Spaulding. Compliance with signals and other controls would be expected to minimize any increased risk of vehicle/train collisions there.

Vehicle Delays at Highway/Rail At-Grade Crossings

The addition of both CN and STAR Line trains to the EJ&E rail line would increase vehicle delay, including emergency vehicles and school busses, at approximately 40 at-grade crossings. The length of some delay events could be increased by trains passing in opposite directions. The number of delay events would also increase because of the addition of CN and STAR Line trains. Metra's choice of construction plans would influence train speeds which, in turn, would influence the extent of additional vehicle delay.

Pedestrian Safety at Trails

Four pedestrian at-grade trail crossings would see additional CN and STAR Line trains and could be crossed by additional track depending on Metra's choice of construction scenarios. The four trails include the Army Trail Bike Path in Wayne, the Illinois Prairie Path near West Chicago, the Illinois Prairie Path near Aurora, and the Ogden Bike Path near Aurora. The additional trains and tracks would increase the risk of accidents, but presumably this increased risk would be addressed by an agreement between the parties as to the appropriate warning device upgrades and other modifications.

Socioeconomic Effects

SEA's review of Metra's alternative choices for construction of the STAR Line in Section 2.3.1, above, includes the construction of a separate track for STAR Line operations. If this alternative is selected, there may be a need for acquisition of additional ROW at some locations. If there were a

need for additional ROW, there could be cumulative socioeconomic effects. These effects would vary based on the amount of land acquired and whether it was occupied by homes or businesses. In addition, Metra's construction plans could require relocation of water, electric, telecommunications and/or other utilities that occupy parts of the EJ&E ROW. Utility relocations would require coordination with municipalities and private utilities but would cause only short-term effects. The implementation of commuter service along the STAR Line corridor could augment Transit-Oriented-Development at, or near, the proposed station locations. Once up and running, the STAR Line could transport approximately six million passengers annually with a corresponding reduction of vehicles from regional highways.

Biological Resources

SEA identified three publicly owned forest preserves, which are currently bisected by the EJ&E rail line and therefore, could eventually accommodate additional track for the STAR Line. The three preserves are Pratt's Wayne Woods Forest Preserve in DuPage County near Wayne, Illinois, West Chicago Prairie Forest Preserve in DuPage County, and Lake Renwick Heron Rookery Forest Preserve in Will County near Plainfield, Illinois. Although Metra has not selected a specific alignment to connect the STAR Line along the EJ&E with the STAR Line Northwest Corridor Segment along I-90, one or more of the connection alignments could occur inside Shoe Factory Woods Forest Preserve in Cook County, Illinois, near Hoffman Estates. SEA has identified one location where Metra may need to construct additional track for the STAR Line and CN has proposed to construct a connection as part of the Proposed Action. That location is the proposed Munger connection in Pratt's Wayne Woods in DuPage County near Wayne.

At the proposed Munger connection, the effects of Metra's and CN's construction projects on noise, air quality, wildlife movement, and public uses could result in construction-related cumulative effects if the construction projects occur at approximately the same time. However, these construction-related effects would be short-term. At all four forest preserves, the effects of the operation of additional CN and STAR Line trains would result in cumulative effects on noise and wildlife movements and could work together to reduce public use of the forest preserves.

SEA identified six publicly owned parks and forest preserves that are adjacent to the EJ&E where cumulative effects on noise, wildlife movements, and public uses could occur due to the combined operation of CN and STAR Line trains. The six are Pioneer Park and Manville Oaks Park in West Chicago, Illinois, Fermilab Prairie in Batavia, Illinois, Night Heron Marsh Forest Preserve (with the recent expansion) in DuPage County near Aurora, Illinois, the Vermont Cemetery Nature Preserve in Plainfield, Illinois, and the Weisbrook Access in Plainfield, Illinois.

Water Resources

Additional potential cumulative effects on water resources and wetlands from the construction of the STAR Line along the EJ&E rail line could occur at its connection with the STAR Line Northwest Corridor Segment through Shoe Factory Woods, the construction of a second track through Pratt's Wayne Woods, and the construction of a second track through Lake Renwick Heron Rookery Forest Preserve. Illinois' Shoe Factory Woods contains wetlands, Pratt's Wayne Woods contains wetlands and streams, and Lake Renwick is open water. Whether there would be any such effects, or their extent, cannot be determined until Metra chooses a preferred alignment for the connection and decides whether to build a second track. Based on Metra's determinations, there may need to be permits from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (33 USC 1344) and water quality certification from the Illinois Environmental Protection Agency under Section 401 of the Clean Water Act (33 USC 1341). These processes would provide the opportunity to develop any appropriate mitigation.

2.3.2 Proposed Northern Indiana Commuter Transportation District Service that Potentially Affects the EJ&E Rail Line

During the public comment period for the Draft EIS, several commenters objected to SEA's decision not to analyze the effect of the Proposed Action on the Northern Indiana Commuter Transportation District's (NICTD) proposed West Lake Corridor service, and provided arguments for why SEA should have determined that the service is "reasonably foreseeable." Further, these commenters asked for a level of analysis sufficient to determine whether the Proposed Action would have an effect on the proposed NICTD service.

SEA used the term "reasonably foreseeable" in the Draft EIS because this term is used in the regulations of the Council on Environmental Quality (CEQ) that relate to the preparation of environmental impact statements. These regulations can be found at 40 CFR Part 1500. The term "reasonably foreseeable" is found in two places in these regulations. One place is in the definition of "indirect effect" (40 CFR 1508.8(b), which is an effect that occurs later in time or farther removed in distance but is still reasonably foreseeable. Another place is in the definition of "cumulative impact" (40 CFR 1508.7), which is an effect attributable to the incremental effect of the action when added to other past, present and reasonably foreseeable future actions. Section 5.2 of the Draft EIS explains how SEA assessed indirect and cumulative effects. In Section 3.C of the final scope of study, STB used the same term when it stated "The EIS will…discuss proposed transaction-related effects on…proposed commuter…rail service…as appropriate…[and] evaluate the capability of the EJ&E rail line segments or crossings to accommodate the reasonably foreseeable addition of commuter trains."

2.3.2.1 Northern Indiana Commuter Transportation District Service Background

When SEA determined in the Draft EIS that NICTD's proposed commuter service expansions, including the West Lake Corridor to Lowell and to Valparaiso, Indiana, was not reasonably foreseeable, it was not concluding that this service was never going to be implemented. SEA was simply concluding that not enough information on the NICTD service is available to warrant that sort of evaluation. SEA also properly noted that the Draft EIS did not need to include a detailed analysis of effects on or attributable to these projects because the key decisions on whether to implement the West Lake Corridor commuter service will be made by the appropriate levels of government in Indiana and the Federal Transit Administration under the rules governing Major Capital Investment Projects (49 CFR Part 611); those processes would ensure that there is adequate study of the NICTD service before that service could be implemented.

In order to address commenters' concerns about this issue, SEA has analyzed the West Lake Corridor commuter service rail alternatives as if they were reasonably foreseeable. That analysis, associated revisions, and recalculations are provided in the following sections.

2.3.2.2 Northern Indiana Commuter Transportation District Service Analysis

NICTD is considering two new West Lake Corridor commuter rail services between Chicago and communities in northwest Indiana. Trains for both services would use existing Metra and NICTD trackage to Kensington, Illinois, and NICTD trackage to Hammond, Indiana. Trains at Hammond would use an inactive rail corridor controlled by NICTD. This corridor would be restored to active service for NICTD service south to Maynard, near Munster, Indiana. At Maynard, NICTD trains operating between Chicago and Valparaiso would use the CN South Bend Subdivision between Munster and Valparaiso; this service would cross the EJ&E rail line at Griffith, Indiana. See Figure 2.3-1, NICTD Proposed Service Expansion, below.

Figure 2.3-1
NICTD - Proposed Service Expansion Corridors

A second service connecting Chicago to Lowell, Indiana, would diverge from the Valparaiso service at Maynard, where it would proceed south on the CSX rail line between Munster and Lowell. This service would cross the CN South Bend Subdivision at Maynard and EJ&E rail line at Dyer, Indiana (STV Incorporated 2006a; 2006b).

2.3.2.3 Chicago to Lowell, Indiana Route Direct Effects Conclusion

Kensington Interlocking

Under the Proposed Action, CN trains at Kensington, Illinois, would be reduced from 8.4 to 2.0 trains per day (TPD), thereby influencing operations and on-time service. The Proposed Action would also benefit NICTD's plan to construct a by-pass track around Kensington Station.

Maynard Interlocking

The Proposed Action would reduce trains at Maynard, so there would be no effects to this rail/rail at-grade crossing (interlocking).

Dyer Interlocking

The Dyer, Indiana, rail/rail at-grade crossing is an automatic interlocking, which generally operates on a first-come, first-served basis. If it were determined that NICTD required priority to facilitate efficient commuter service, NICTD would need to negotiate an agreement with CSX and EJ&E, or, if the Proposed Action is approved, with CN.

If approved, the Proposed Action would have a minor effect on all trains as they cross the Dyer interlocking. CN would operate 17 trains per day in each direction for a total of 34 trains. NICTD would potentially operate eight trains per day in each direction during peak commuter service and one train in each direction mid-day. SEA calculated the amount of time that the Dyer interlocking would be occupied by the freight and passenger trains expected to use the interlocking under the Proposed Action as well as with NICTD commuter service. The calculations are provided in Appendix A of this Final EIS. SEA calculated 6.7 hours out of a 24-hour period as the total time the Dyer interlocking would be occupied as a result of the Proposed Action (which includes Amtrak, CSX, and CN operations). With NICTD commuter service, the interlocking would be occupied an additional 1.8 hours out of a 24-hour period. As a result, the Proposed Action is not expected to have an adverse effect on NICTD's commuter rail service to Lowell.

2.3.2.4 Chicago to Valparaiso, Indiana, Route Direct Effects Conclusion

Maynard to Griffith

Under the Proposed Action, CN trains would not use the Waukesha, Chicago, and/or the Elsdon Subdivisions to gain access to the BRC Clearing Yard. However, an increase in train movements by up to 20 trains per day resulting in a proposed volume of an average of 34 trains per day would occur on the EJ&E rail line between Griffith and Kirk Yard, Indiana.

If the Proposed Action were approved, CN would still own and operate on the South Bend Subdivision. However, the Proposed Action offers the possibility of a substantial benefit to NICTD's West Lake Corridor plan as an average of 19.2 trains per day would be removed from this corridor and diverted onto the EJ&E alignment. Surplus capacity on the existing CN rail line from Maynard to Griffith (known as the Elsdon Subdivision) could potentially be available to NICTD. NICTD currently operates its passenger service on the South Shore Line (Chicago South Shore & South Bend Railroad). Electric train operations are required on the South Shore Line in locations where diesel locomotives are prohibited. This means that if NICTD commingles service by operating on both passenger and freight rail lines, it would likely operate dual-mode locomotives (electric

catenary/diesel), using diesel power to avoid clearance issues on freight lines it might use, and switch to electric power on passenger rail segments with overhead electric lines. The potential surplus capacity for NICTD is considered a beneficial effect.

Griffith Interlocking

The Proposed Action would allow CN to assemble longer trains, so fewer train starts would be required. This potential benefit to CN, would also free up capacity, could afford NICTD the opportunity to re-engage CN in its effort to obtain CN's permission either to 1) commingle service on the South Bend Subdivision or 2) acquire permission to build a separate line within CN's ROW.

At Griffith, Indiana, a flyover of the West Lake Corridor, with an underpass at Broad Street would likely be optimal, with the CN and EJ&E freight lines remaining at grade.

2.4 School Related Issues

SEA received numerous comments on the Draft EIS expressing concern over the effects that the Proposed Action would have on school safety and school bus and student delays. Residents were concerned about the safety of school age children crossing the tracks on foot, on bicycle, or in the case of older high school age students, driving their own vehicles to and from school. Communities were concerned with issues regarding school buses; namely the concern for potential school bus collisions with trains. A number of comments expressed concern for safe access to school grounds near the tracks. Finally, commenters expressed concern that increased rail traffic would cause the following conditions: 1) delay school buses and pedestrian school children, 2) require developing new bus routes, 3) increase the need to coordinate school bus routes with train schedules, and 4) require more school buses or more schools. School safety issues are discussed in Section 2.4.1 and school bus delay issues are discussed in Section 2.4.3.

2.4.1 School Safety

The Draft EIS addressed school safety issues generally (see Chapters 3 and 4 of the Draft EIS) but did not specifically address the relationship between various school age populations and travel safety. In response to Draft EIS comments, SEA is providing additional analysis and discussion of these issues. For purposes of this analysis, schools included are public and private kindergartens through elementary, middle, and high schools that are located within 2 miles of the tracks. As discussed in Section 2.4.1.4 of this Final EIS, it is important to note that far more schools are located near the CN rail line that would have a reduction of train traffic under the Proposed Action than schools located near the EJ&E rail line segments that would experience an increase in train traffic. In addition, many of the concerns related to school safety are existing conditions. School safety issues are summarized in the following sections.

2.4.1.1 Students Walking or Cycling

SEA's analysis of pedestrian and bicycle safety for this Final EIS included all age groups. The analysis considered pedestrians crossing either the EJ&E or CN rail line at highway/rail at-grade crossings that provide pedestrian access. Typically, this is a sidewalk or pathway that shares the same right-of-way and crossing warning devices as the adjacent street.

Students who cross the tracks at grade-separated structures, either overpasses or underpasses, are not currently considered to be at risk, nor would they be under the Proposed Action, and concerns for pedestrian safety are not age-specific. However, the primary concern of the commenters is that school age children by their nature can exhibit risky or inappropriate behavior due primarily to lack of experience, poor judgment, and a misunderstanding of the risks. However, communities have resources to take action to make these crossings for pedestrian traffic (including students) near

schools as safe as possible. Examples of safety recommendations at crossings that communities can consider include the following:

1) At locations where it is intended that students cross the tracks, there should be a sufficient walking or cycling surface that is sufficiently wide and is free of tripping or slipping hazards. This allows students to approach the crossing with their attention focused on looking for trains instead of navigating the surface. Students and other pedestrians should also be provided with a combination of audio and visual warning devices such as bells and lights at the crossing, signs, and automatic gates. Clear sight lines also allow students and other pedestrians to view approaching trains.

2) Where students are required to wait for a train, there should be a safe area where they can stand that is free from hazards such as the passing train itself, highway traffic, driveway approaches, and adjacent tracks. The dimensions of a "safe waiting area" are dependent upon the estimated number of students that are expected to occupy the area. Stopped or very slow-moving trains are of special concern where students are waiting as there can be a tendency for students to crawl under or on and then between rail cars. This is a particular concern in West Chicago, and specific mitigation is recommended for that location to prohibit trains from stopping and blocking the crossing.

3) Students need to have a clear understanding of when a train has passed and when it is safe to cross railroad tracks. Where trains run on two or more tracks through the crossing, communities should consider ensuring that there are sufficient visual sight lines and/or audible warning devices for students to make the appropriate decision that a second train is not following the first train.

4) Once adequate warning and a sufficient safe waiting zone is provided, the primary concern becomes students making the appropriate decision to wait for the train(s). This issue can typically be addressed by communities through education and enforcement. Students should understand the risks and appropriate responses. This should be followed with a suitable level of enforcement and/or monitoring to reinforce appropriate behavior.

The Applicants have presented voluntary mitigation measures (VM 10, 11, and 12) to improve pedestrian safety near schools, such as providing fencing. These are separate from the recommendations mentioned above, and address safety at crossing locations.

2.4.1.2 Student Drivers

Frequently, students of driving age travel to and from school in personal vehicles. SEA evaluated the predicted risks associated with drivers as part of earlier analysis in Chapter 4 and Appendix C of the Draft EIS. Though the analysis did not include age-specific criteria, concerns were expressed for less experienced and less attentive drivers who may be distracted or ignore the warning devices, or take an inappropriate risk by attempting to beat the train through the crossing, and/or drive around lowered crossing gate arms. The primary focus for improving safety among student drivers is through education and enforcement. Communities can adopt measures to educate student drivers regarding the risks and the appropriate responses followed by a suitable level of enforcement and/or monitoring to reinforce appropriate student driver behavior.

2.4.1.3 School Bus Safety

Community residents also raised concerns related to the safety of children being bused to and from school and were concerned that the additional train traffic would have an adverse effect on safety.

SEA's analysis predicted the number of expected highway/rail at-grade crossing accidents using the FRA's accident prediction model (see Chapters 3.2 and 4.2 in the Draft EIS). The accident prediction

formula includes anticipated train traffic as well as average daily vehicular traffic. This vehicular traffic includes all types of motorized vehicles that routinely cross railroad tracks, including cars, trucks, buses (including school buses), motorcycles, and any other motorized roadway users. The prediction formula does not provide analysis for a specific vehicle type.

In addressing school bus safety more specifically in this Final EIS, SEA noted that since trains are unable to stop or take evasive action to avoid highway/vehicle collisions, safety is primarily a function of providing drivers with adequate warning of a train approach and sufficient distance to bring their vehicles to a controlled stop once the warning is recognized. Illinois law requires school bus drivers to respond appropriately at railroad crossings and associated warnings. Moreover, proper training of school bus drivers requires that they understand the size, weight, and operational characteristics of their vehicle to allow them to be able to safely control and stop their vehicle prior to entering the track zone or an adjacent roadway intersection. School bus drivers are not considered typical drivers in that that they are screened, hired, and trained by the schools that they serve and have obtained special licensing from the state which qualifies them to operate the school bus.

2.4.2 Proximity of Schools to the Tracks

In addition to concerns related to students traveling to and from school, commenters expressed concerns ranging from exposing children (and others) who may cross tracks at locations other than designated crosswalks, to train accidents/derailments. Such incidents may include exposure to hazardous materials, and emergency response in the event crossings are blocked by a train. These concerns were adequately addressed in Chapters 3 and 4 of the Draft EIS.

In preparing the Final EIS, SEA identified the number of schools located along the rail lines that would see a change in train traffic as a result of the Proposed Action. The analysis included obtaining U.S. Census Bureau and local GIS data containing the names and locations of schools within the study area. Additional research was conducted to obtain school names and location information from local school districts, county regional offices of education, National Catholic Education Association, and the Illinois and Indiana State Boards of Education. This information was integrated into a database, and screened using GIS analysis to identify schools located within 2 miles of EJ&E or CN mainlines. SEA further refined the list of schools by removing non-traditional K-12 schools as well as schools that have been closed.

The list of schools within ¼-mile of the tracks was further checked and verified through aerial photography. SEA identified the locations of schools whose property abutted the railroad ROW using aerial photography. Table 2.4-1 summarizes the results of this analysis.

Table 2.4-1. Number of Schools Near the EJ&E and CN Lines

	Schools Immediately Adjacent to Tracks	Schools within 0.25 Mile of the Tracks	Schools within 2.0 Miles of the Tracks
EJ&E Line	12	44	344
CN Lines	14	118	983

Based on analysis, SEA concludes that the concern for, and risks associated with, student populations crossing the tracks exists today because the proximity of these schools to tracks on which there is rail traffic is an existing condition. The Proposed Action would exacerbate these issues along those line segments that would see additional trains, but it is unlikely that the Proposed Action would create conditions that do not currently exist.

2.4.3 School Bus Delays

Many commenters on the Draft EIS expressed concern that increases in train volumes and train length would cause school buses to be significantly delayed as they cross the EJ&E rail line. School buses run in mixed flow with other private and commercial vehicles and do not receive preferential treatment at traffic signals or other traffic control devices. Therefore, the potential for delayed operations of the school bus fleet is the same as that for all other vehicles. In other words, existing congestion occurring near schools would continue to delay all traffic, including school buses.

Vehicle delay calculations for the No-Action and Proposed Action alternatives were prepared for EJ&E and CN segments of the project. Results were summarized in Chapter 3 and Appendix E of the Draft EIS. After publication of the Draft EIS, new train data and traffic counts were supplied to SEA by the Applicants, the Illinois Department of Transportation, and the City of Plainfield, Illinois. SEA reviewed and verified the updated data. Delay calculations were re-compiled for the Final EIS using the updated data and are provided in Chapter 2.5 of this Final EIS.

SEA's final vehicle delay analyses shows that vehicles in the study area would experience an average increase of 0.6 minutes of delay per delayed vehicle at intersections along the EJ&E rail line, and a decrease of 0.9 minutes of delay per delayed vehicle at intersections along the CN study segments projected to take place under the Proposed Action. These times reflect the average change in motorist delay as a result of the increase or decrease in train traffic, and would vary for each crossing. Specific delay values between the No-Action and the Proposed Action for each EJ&E highway/rail at-grade roadway crossing in the study area are included Section 2.5 of this Final EIS. Delay values for CN crossings are in Table 4.3-6 in Section 4.3.1.3 of the Draft EIS.

For example, on the EJ&E rail line the average time that each vehicle would be stopped by a train on Hough Street in Barrington for the No-Action Alternative is estimated at 0.9 minutes. Following the Proposed Action, the delay estimate would rise to 1.6 minutes, an increase of 0.7 minutes of delay to motorists. (This delay is slightly higher than the average increase.) On average, school buses would have to adjust scheduling by less than one minute. Thus, SEA has concluded that this is unlikely to affect arrival times at schools.

Crossings on the CN rail lines would experience a reduction in delay under the Proposed Action. For example, motorists at the York Road crossing in the Freeport Subdivision of Elmhurst, Illinois, currently experience an average wait of 1.7 minutes while trains pass. Under the Proposed Action the average delay for a train to pass would be reduced to 0.9 minutes, or a decrease of delay of 0.8 minutes.

SEA concludes that school buses would not experience significantly increased delay as a result of the Proposed Action. While delays at at-grade crossings along the EJ&E would increase, delays along the CN rail lines would decrease, improving school bus access in those areas.

2.4.4 Conclusions

As described in Chapter 4 of this Final EIS, the Applicants have offered voluntary mitigation that would provide fencing along the ROW where schools are adjacent to EJ&E rail line. The Applicants' voluntary mitigation also includes identifying elementary, middle and high schools within 0.50 mile of the EJ&E rail line and making available Operation Lifesaver programs. CN has also stated that upon request the Applicants would provide railroad safety materials to schools, and cooperate with school and park districts to identify at-grade crossings where additional pedestrian warning devices may be warranted. SEA recommends that the Board impose the Applicants' voluntary mitigation in any decision approving the Proposed Action. However, SEA has determined that mitigation beyond that voluntarily offered by the Applicants is not warranted.

2.5 Updated Transportation Information and Analysis

In the Draft EIS, SEA reviewed all highway/rail at-grade crossings on the EJ&E rail line and affected CN rail line segments to identify those that met its thresholds for detailed analysis (See Section 4.3, Transportation Systems). The Proposed Action would increase train operations and associated adverse effects in many communities along the EJ&E rail line, and would also remove trains from affected CN rail line segments within the EJ&E arc. This would reduce vehicle delays and increase safety at CN highway/rail at-grade crossings inside the EJ&E arc.

SEA's analyses for the Draft EIS identified 16 highway/rail at-grade crossings as "substantially affected" by the Proposed Action and considered 15 of those crossings for possible mitigation. Substantially affected means the crossing would be affected by the Proposed Action in one or more of three ways:

1) The crossing's Level of Service (LOS)[1] would be at or over-capacity by being rated E-F, meaning it would be seriously to extremely congested, or the crossing's LOS changed from LOS D or better to worse than LOS D
2) The crossing would experience more than 40 hours of total combined vehicle delay in a 24 hour period (2,400 minutes per day)[2] [based on available Average Daily Traffic (ADT)[3] volumes
3) The queue length of waiting vehicles at the crossing would block a major thoroughfare that is not blocked under the No-Action Alternative

Several commenters on the Draft EIS took the position that SEA should only use the LOS threshold in its analysis of traffic delay. Although SEA traditionally relies on LOS to identify substantially affected crossings, in appropriate cases SEA has also used total vehicle delay and calculated queue lengths at affected crossings to better determine the effects of an action on traffic mobility. In the Bayport Loop Draft EIS, SEA's analysis of effects on vehicle delay included the 40-hour total vehicle delay per day and crossing LOS thresholds. In the Conrail Draft EIS, SEA used queue lengths in its calculations. As discussed in more detail below, SEA decided that in this case, using all three thresholds to determine substantially affected crossings would more precisely identify the Proposed Action's overall mobility effects on the area's roadway systems. Crossing LOS determines the effects of the Proposed Action at a single point along a roadway at the affected highway/rail at-grade crossing. Crossing LOS, however, does not take into account the effects of the Proposed Action on mobility in a community or region. Proposed Action queue lengths blocking a major thoroughfare could potentially block through movements on the blocked major thoroughfare. Total vehicle delay reflects delays to the community as a result of the Proposed Action. Therefore, queue length and total vehicle delay are measurements of the Proposed Action mobility effects on a community.

While SEA considered all of the substantially affected crossings for mitigation, its final recommendations to the Board would also take into account pre-existing traffic congestion. SEA's original and updated analyses indicate that many of the traffic problems experienced at crossings that would be affected by the Proposed Action are pre-existing. Pre-existing conditions are beyond the Board's authority to mitigate. Furthermore, it would be inappropriate to hold the Applicants

[1] LOS refers to the efficiency at which a roadway, intersection, or highway/rail at-grade crossing operates and is a reflection of vehicle delay and congestion. Letters from A to F are assigned to the LOS, with LOS A indicating relatively free flowing traffic and LOS F indicating extreme congestion.

[2] As discussed in the Draft EIS, the total delay per day at a crossing is the sum total of the delay for each driver that was delayed at the particular highway/rail at-grade crossing. In other words, if in one day 60 vehicles are delayed at a particular highway/rail at-grade crossing and each vehicle is delayed 1 minute then that would be a total of 60 minutes of delay or one hour of delay per day. If there were 1,200 vehicles delayed and each vehicle was delayed by 2 minutes, then that would equal 2,400 minutes of delay or 40 hours of delay in one day.

[3] ADT is the average number of vehicles per day traveling on the roadway.

responsible for the presence of the many at-grade crossings in the communities along the EJ&E rail where there are now few existing grade separations. SEA's final recommendations regarding the crossings that warrant mitigation and the type of mitigation that is appropriate to address vehicle delays at selected substantially affected crossings are described in detail in Chapter 4 of this Final EIS.

Specifically, following publication of the Draft EIS, SEA received many comments concerning the basis for its conclusions, as well as the status of particular crossings. An example of a comment is, "Overall, we believe that the Draft EIS is deficient in the area of current as well as projected traffic volumes." In responding to the comments, SEA worked with IDOT, local agencies, and communities to obtain updated ADTs. SEA also consulted with the Applicants about the potential traffic delay effects that would be associated with the Applicants' original proposed connection at Matteson, and the existing connection at Leithton. Because of the anticipated slower train movements through the connections, nearby highway/rail at-grade crossings would have increased traffic delays. See the Draft EIS. As a result of this and other potential effects, the Applicants revised the proposed Matteson and Leithton connections, to allow increased allowable train speeds and thereby reduce projected vehicle delays at the nearby crossings. See Section 2.1 and 2.2 above for descriptions of the two revised connections.

Using all of the updated data and information obtained, SEA conducted new analyses on 88 affected EJ&E highway/rail at-grade crossings as part of this Final EIS (see Appendix A). Of the original 16 substantially affected crossings identified in the Draft EIS, based on the revised analysis SEA determined that five crossings would not exceed the thresholds. In addition, SEA determined that two crossings not identified in the Draft EIS would exceed the thresholds. SEA's new analyses resulted in 13 crossings being designated as substantially affected by the Proposed Action. See Figure 2.5-1, below.

The additional data SEA used in its new analyses include updated ADTs and updated train operating data, which are discussed in Sections 2.5.1, 2.5.2, and 2.5.3, respectively. SEA's final list of substantially affected crossings is shown in Section 2.5.4; those crossings that are no longer considered to be substantially affected are shown in Section 2.5.5. Section 2.5.6 contains SEA's discussion of the five substantially affected crossings that are not recommended for mitigation. Section 2.5.7 describes the updated Total Vehicle Delay related to the Proposed Action. Section 2.5.8 discusses potential changes in regional mobility that SEA identified in its updated analyses; potentially affected signalized intersections are described in Section 2.5.9.

2.5.1 Additional Average Daily Traffic Counts

The IDOT and Lake County, Illinois, updated ADTs for many affected highways after SEA conducted its vehicle delay analyses for the Draft EIS. SEA used these updated ADT counts to identify 32 crossings along the EJ&E rail line and 26 crossings along CN rail lines that required new analyses. The crossings along the EJ&E rail line include 11 crossings in Lake County, four crossings in DuPage County, 14 crossings in Will County, and three crossings in southeastern Cook County.

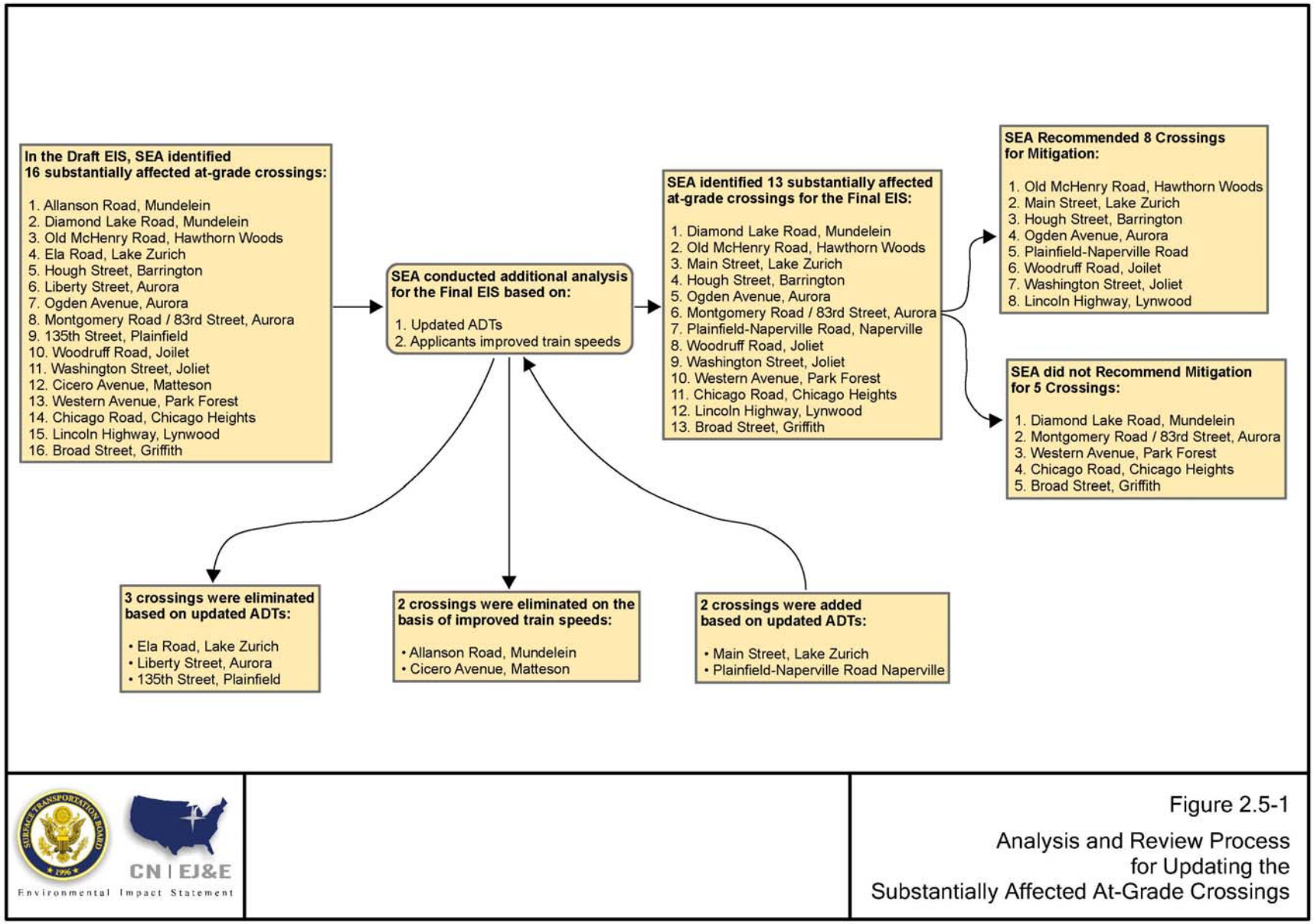


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Figure 2.5-1
Analysis and Review Process for Updating the Substantially Affected At-Grade Crossings

The CN crossings SEA re-analyzed included 18 crossings on CN's Waukesha Subdivision, four on its Freeport Subdivision, one on the Joliet Subdivision, and three on the Elsdon/Southbend Subdivision.

2.5.1.1 EJ&E Rail Line

By using the updated ADTs, SEA increased the number of EJ&E crossings it analyzed from 87 in the Draft EIS to 88 in this Final EIS. Keating Drive/87th Street near Aurora, Illinois, was added because the updated ADTs suggest that Keating Drive would exceed the 2,500 ADT threshold SEA applied to at-grade crossings for inclusion in the 2015 analysis for the No-Action and Proposed Action Alternatives. In addition, SEA found changes in ADT data at some of the original crossing locations. For example, along the EJ&E rail line, the ADTs used at the Main Street and Old Rand Road crossings in Lake Zurich, Illinois have declined because of the new IL 22 bypass constructed east of the highway/rail at-grade crossings. Most of the traffic that would use Main Street and Old Rand Road has shifted to the IL 22 bypass, which reduced traffic volume on Main Street and Old Rand Road in Lake Zurich.

At Keating Drive/87th Street, near Aurora, Illinois, and 127th Street near Plainfield, Illinois, the increase in ADT volume more than doubled. As a result of SEA's updated analysis, seven crossings (six in Lake County, Illinois and one in DuPage County, Illinois) showed very little change in ADTs. Five crossings (all in Will County) showed an increase when comparing ADT data used in the Draft EIS with updated ADTs used in this Final EIS. The ADTs at 19 crossings are lower ranging from a reduction of six percent at Hough Street/IL 59&63 in Barrington, Illinois, to 57 percent decrease on Main Street in Lake Zurich.

A new ADT estimate SEA obtained for Stearns Road near Bartlett, Illinois shows the vicinity of the highway/rail at-grade crossing on Stearns Road will be 32,000 ADT for the year 2020. Stearns Road use will increase as a result of the planned Fox River Bridge in nearby Kane County, Illinois (IDOT 2008). To develop the 2015 ADT estimate for the Stearns Road crossing in Bartlett, SEA applied a three percent annual reduction to be consistent with previously applied growth rates in DuPage County.

Section 2.5.2 below, contains SEA's discussion of projected traffic growth rates and their use in identifying substantially affected crossings for this Final EIS. Updated ADTs related to these crossings and communities in which they are located are in Appendix A-11 of this Final EIS. These tables also include updated train operations as discussed in Section 2.5.3 below.

2.5.1.2 CN Rail Line

Changes in ADTs on affected CN rail lines also affected data related to vehicle queues, queue length, and Total Vehicle Traffic Delay at affected CN crossings used in the Draft EIS. Updated data related to ADTs related to these crossings and communities in which they are located is included in the Final EIS as Tables 3.3-5, 3.3-9, 4.3-6, 4.3-7, E1.2-10, and E1.2-11 of Appendix A. These tables also include updated train operations as discussed in Section 2.5.3 below.

2.5.2 Growth Rate Factors

ADT counts are not collected by transportation agencies every year so it is not possible to compare actual traffic growth among the counties and cities in the study area without using some estimated ADTs. To obtain a realistic estimate of future ADTs at potentially affected crossings, SEA multiplied available ADTs by a percentage representing previous traffic growth, or an annual "growth factor." See Section 3.3.1.2 of the Draft EIS for a discussion of the growth factors.

After the Draft EIS was published, SEA received many comments questioning the methodology it used to forecast future traffic growth and resulting growth rate projections. Some comments suggested the growth factors used were too low while others stated that they were too high. Others

objected to county-based growth factors being used to project ADT growth at all affected crossings within the same county. In order to address these concerns, SEA reviewed its methodology and traffic growth forecasts.

Growth in most affected counties was estimated using adjacent roadway ADTs, historical ADTs measured prior to 2006, updated ADTs, and regional growth. County engineering staff in Lake and Cook counties, Illinois, provided their projected growth rates. To validate the growth rates used in the Draft EIS, SEA considered census population data for the individual counties. Census data revealed annual population growth similar to the growth rates SEA used to calculate future ADTs. For these reasons, SEA concluded that the growth rates it used in the Draft EIS remain reasonable and justifiable for use in its updated analyses and therefore applied them in its updated analyses for this Final EIS.

In its new analyses, SEA used its growth rate projections for the years 2015 and 2020 based on 2007 and 2008 ADTs to compare at-grade crossing traffic delays that could occur under the No-Action and the Proposed Action alternatives. Source data were compiled from:

- FRA location and inventory databases for highway/rail at-grade crossings ADTs
- IDOT and Lake County, Illinois, databases for roadway ADTs
- ICC database for existing traffic and train delay
- The Applicants' Operating Plan and company databases for train length and speed
- Traffic studies

SEA determined that ADT volume data from IDOT reflected the most recent counts reported by local agencies. Therefore, for roadways without 2007 counts, SEA first applied specific county growth rates to the most recent counts available to obtain 2007 ADTs. SEA then used IDOT 2007 and 2008 ADTs to calculate existing traffic delays and county-specific growth factors to project ADTs for the years 2015 and 2020.[4] See Appendix A of this Final EIS. Because the ADTs SEA obtained from the various sources differed from year to year, SEA determined that a traffic growth factor for each affected county would be applied to traffic counts in each county for the years 2007, 2015, and 2020 as shown in Appendix A of this Final EIS.

SEA applied the applicable traffic growth rates to each affected county on both the EJ&E rail line and affected CN rail lines to forecast the future ADTs. SEA performed additional growth rate analysis for Lake County, Indiana, because of the limited availability of historic and updated ADT data for many of its grade crossings. To adjust these counts through the year 2007, growth factors based on adjacent crossing locations were applied to the outdated ADT numbers.

2.5.3 Updated Train Operations

SEA also made appropriate adjustments to the train operations data for this Final EIS. Train operations data were adjusted for three primary reasons:

- First, as discussed in Section 2.1, above, the Applicants revised the proposed new connection at Matteson, Illinois to reduce the effect that the connection would have on the EJ&E rail line track speeds.
- Second, as discussed in Section 2.2, above, the Applicants propose to modify the existing connection at Leithton (near Mundelein, Illinois) to allow trains to move at a higher speed through the connection. The changes at Matteson and Leithton would increase

[4] SEA calculated the delay for the year 2020 using 2015 proposed train data (number of trains, lengths, and speeds) and 2020 ADT data for the purpose of potential future regional planning by local, regional and state government agencies.

train speeds at nearby highway/rail at-grade crossings, thereby reducing some potential environmental effects.

- Finally, as discussed in Section 2.14, below, the Applicants corrected the train numbers at several highway/rail at-grade crossings near locations where rail traffic moves on or off the EJ&E rail line.

2.5.3.1 EJ&E Rail Line

The Applicants provided SEA with updated train data related to the revised connection plans at Matteson and Leithton that were incorporated into SEA's new vehicle delay analyses in this Final EIS. The new data included increases in average train speeds on the EJ&E rail line at the highway/rail at-grade crossing of Diamond Lake Road and IL 60/83 near Mundelein, Illinois, Cicero Avenue near Matteson, Main Street in Matteson, and Western Avenue near Park Forest. The Applicants also corrected the number of trains per day at Van Dyke Road and 143rd Street near Plainfield, Main Street in Matteson, East End Avenue in Chicago Heights, and Broad Street in Griffith, Indiana.

With the Revised Matteson Connection (see Revised Matteson Connection, Section 2.1) and the clarification on the number of trains that would move through the connection, SEA revised the related train data, including average length, average speed, and number of trains affecting the three crossings. For example, based on the Applicants' updated train operations, the total projected vehicle traffic delay for the Main Street at-grade crossing would be 236.8 minutes (mainline delay) plus 486.0 minutes (north connection delay) plus 381.6 minutes (south connection delay) for a total of 1,104.4 minutes in a 24-hour period. In the Draft EIS, prior to incorporating the updated train speed data, Main Street's total vehicle delay was 1,036 minutes.

Main Street did not exceed SEA's thresholds in either the analysis in the Draft EIS or this Final EIS. However, Cicero Avenue near Matteson, and Western Avenue, in Park Forest, Illinois, were both identified in the Draft EIS as substantially affected. The Applicants revised the Matteson connection and increased train speeds that reduced the total vehicle delay at Cicero Avenue, which allowed SEA to remove it from the list of substantially affected crossings in this Final EIS. Western Avenue is discussed in section 2.5.4, below. Updated train information related to these crossings and communities in which they are located is included in the Final EIS as Tables 3.3-3, 3.3-8, 4.3-4, 4.3-5, E1.2-1, and E1.2-2 of Appendix A of this Final EIS. These tables also include updated ADT's discussed in section 2.5.1 above.

2.5.3.2 CN Rail Line

Following issuance of the Draft EIS, the Applicants proposed a modification to the original Leithton Connection, discussed in Section 2.2, above, which allowed for changes to the connection at Leithton that would increase the train speed through the connection and would reduce the total vehicle delay previously projected at Allanson Road under the Proposed Action. In addition, as discussed in Section 2.14, the Applicants updated train operation information for the CN rail line segments that adjusted train length and number of trains per day. SEA concluded that the updated train data would affect 43 crossings on CN's Waukesha Subdivision, six crossings on its Freeport Subdivision and one crossing on its Elsdon/Southbend Subdivision. Updated train information related to these crossings and communities in which they are located is included in the Final EIS as Tables 3.3-5, 3.3-9, 4.3-6, 4.3-7, E1.2-10, and E1.2-11 of Appendix A of this Final EIS. These tables also include updated ADT's, as discussed in section 2.5.1 above.

2.5.4 Substantially Affected Crossings

As stated previously, SEA used three thresholds to determine if a highway/rail at-grade crossing would be substantially affected by the Proposed Action. If a crossing exceeded one or more of the

thresholds, SEA evaluated the crossing for appropriate mitigation. As a result of its new analyses described above, SEA presents its final conclusions on the crossings that would be "substantially affected." SEA's discussion of mitigation is in Chapter 4 of this Final EIS. Figure 2.5-1, above, shows the process followed to update information about the substantially affected crossings.

Diamond Lake Road, Mundelein, Illinois

Diamond Lake Road is a two-lane collector running north/south and crossing the EJ&E rail line east of the IL 60/83 crossing. Diamond Lake connects to US 45 approximately 4,400 feet north of the highway/rail crossing. The intersection of Diamond Lake and IL 60/83 is located approximately 450 feet south of the EJ&E crossing.

Diamond Lake Road continues to be classified as a substantially affected crossing because the queue length on Diamond Lake would be 466 feet and would exceed 450 feet, which is the distance between the crossing at EJ&E and the intersection with IL 60/83. As vehicles on Diamond Lake approach the EJ&E rail line crossing, the queue begins to build and eventually could block traffic that would be waiting to turn left from IL 60/83 NW to head southbound on Diamond Lake Road. Through traffic would not be blocked because traffic would have already stopped at the IL 60/83 crossing when trains pass through the EJ&E crossing. The distance between highway/rail crossings for both roadways is approximately 550 feet. SEA assumed that when a train passed one of the roadways, it would have an immediate effect on the other roadway and crossing.

Old McHenry Road, Lake Zurich, Illinois

Old McHenry Road is a four-lane arterial that runs east/west and crosses the EJ&E rail line to the east of the Old McHenry Road/Midlothian Road intersection. Approximately 1,015 feet west of the highway/rail crossing, Old McHenry Road intersects Midlothian Road. Old McHenry Road is a substantially affected roadway because the queue length of approximately 1,186 feet could potentially block Midlothian Road for the Proposed Action scenario and the total vehicle delay for a 24-hour period would be 2,540 minutes, or in excess of the 2,400-minute threshold established by SEA.

Main Street, Lake Zurich, Illinois

The Main Street crossing in Lake Zurich was originally part of IL 22. In 2007, a new bypass was constructed on the east side of the EJ&E track that crosses under the railroad via a grade-separated crossing. The IL 22 bypass is a four-lane arterial that runs for about 0.5 miles parallel to the EJ&E track before it reaches the grade-separation. Main Street 'T's at IL 22, just east of the highway/rail at-grade crossing. The T-intersection is signalized. The 2015 ADT cited in the Draft EIS for Main Street was estimated to be 17,471 vehicles per day. However, SEA reanalyzed projected traffic delays using updated ADTs and found that most of the traffic on Main has shifted to the new IL 22 bypass, thereby reducing Main Street's estimated 2015 ADT to 7,474 vehicles per day.

Despite this change in the projected ADT, Main Street would experience a queue length at IL 22 of 575 feet under the Proposed Action. The distance between Main Street's "T"- intersection at IL 22 and the highway/rail crossing is 425 feet. The right- and left-turn storage lanes on IL 22 at Main Street are each approximately 175 feet long. Therefore, as motorists wait in these turn lanes, the queue on Main Street could extend beyond the turning lanes from Il 22, and affect the non-turn through lanes.

The potential also exists for left-turning traffic traveling northbound on the IL 22 bypass to block the southbound IL 22 traffic. Therefore, SEA has determined that Main Street is a substantially affected roadway because the queue length could potentially block IL 22. The proximity of the grade-separation on the south side of the two highway/rail crossings (Main Street and Old Rand Road) provide motorists a quick alternate route to their destinations from east to west or vise versa. For

example, traffic traveling westbound on IL 22 to go north on Lions Drive or northwest on Old Rand on the west side of the railroad track can take IL 22, or take the underpass to West Main Street, both within less than a mile of the crossing.

Hough Street (IL 59), Barrington, Illinois

Hough Street is a two lane arterial that runs north/south and crosses the EJ&E rail line north of the Barrington Village Center in Barrington, Illinois. Effects to traffic in Barrington related to the Proposed Action, particularly on Hough Street, would be affected by the unique layout of Barrington's streets and two railroads. The EJ&E rail line crosses four streets in Barrington within one mile, including Lake Zurich Road, Northwest Highway (US 14), Hough Street, and Lake-Cook Road. The EJ&E rail line runs in a northeast/southwest direction through Barrington before shifting south at the Lake-Cook Road crossing. The Metra/UP line runs in a northwest/southeast direction through Barrington. The Metra and EJ&E interlocking (rail/rail at-grade crossing) between Hough Street and Lake-Cook Road currently adds to vehicle delays at crossings in Barrington. The Metra/UP rail line crosses Hough Street and Lake-Cook Road very close to where those two roadways intersect. Based on its additional analysis, SEA determines that Hough Street would be substantially affected because the queue length (approximately 1,500 feet) would block Northwest Highway. Hough Street is a substantially affected roadway because the queue length could potentially block Northwest Highway. As part of the evaluation of mitigation, SEA conducted detailed traffic analysis of the Barrington area as discussed in Section 2.5.10 below.

Ogden Avenue (US 34), Aurora, Illinois

Ogden Avenue, located east of Aurora and west of Naperville, Illinois, is a four-lane divided arterial that runs east/west. It primarily serves residential areas on both sides of its EJ&E at-grade crossing. SEA forecasted the 2015 ADT for Ogden Avenue to be 46,110 vehicles per day. As noted by CMAP, Ogden Avenue (US 34) is a Strategic Regional Arterial (CMAP 2008). This designation reflects the importance of Ogden Avenue (US 34) to the region's mobility. The crossing is designated as substantially affected because it would experience a total vehicle delay of 4,377 minutes per day, exceeding the 2,400-minute threshold SEA applied in its updated analyses.

Montgomery Road/83rd Street, Aurora, Illinois

Montgomery Road is a two-lane collector road that runs east/west at the EJ&E rail line crossing, which is located approximately 4,600 feet south of the EJ&E crossing with Ogden Avenue. The intersection of Montgomery Road and Ogden Avenue is just over one mile to the west of the highway/rail crossing. To the east, Montgomery Road crosses IL 59, and further east shares a T-intersection with Book Road. Montgomery Road primarily serves residential areas in the vicinity of the EJ&E crossing. SEA determined the Montgomery Road/83rd Street crossing to be substantially affected because the total delay related to the Proposed Action would be 2,629 minutes, which would exceed the 2,400 minutes per day total vehicle delay threshold.

Plainfield/Naperville Road, Plainfield, Illinois

This two-lane arterial runs northeast/southwest at the EJ&E rail line highway/rail at-grade crossing. The intersection of IL 59 and Plainfield/Naperville Road is located 380 feet southwest of the crossing. The queue length on Plainfield/Naperville Road would be approximately 440 feet, which under the Proposed Action would block Il 59.

Plainfield-Naperville Road forms a 'T' intersection into IL 59. In a typical scenario during a train pass, vehicles would be stopped in the eastbound lane on Plainfield-Naperville Road and in the northbound lane on IL 59 waiting to make a right turn. Since the northbound IL 59 does not have a right turn lane, vehicles waiting to turn right could block the through traffic. In the same way, the

southbound left turn from IL 59 could potentially block the northbound through traffic as the queue is spilled into the intersection. Plainfield-Naperville Road is a substantially affected roadway because the queue length could potentially block IL 59.

Woodruff Road, Joliet, Illinois

Woodruff Road is a two-lane collector that runs east/west and crosses the EJ&E rail line north of the Joliet City Center. SEA has designated Woodruff Road as substantially affected because, under the Proposed Action, it would experience a total vehicle delay in 2015 significantly greater than SEA's threshold and a reduction in Level of Service (LOS) from B to F. Currently, the vehicle queue length of 1,056 feet does not block any intersections for eastbound traffic. Under the Proposed Action, the queue length would increase to 1,814 feet and vehicle delay would increase to 9,381 minutes of delay per day (156 hours of delay per day). Westbound traffic would queue past two minor roads, Charlesworth Avenue and Fairview Avenue, restricting, at times, access to residential streets south of Woodruff Road. Traffic traveling eastbound would be queued to Collins Road (IL 171), preventing left turns onto Woodruff Road. As discussed in more detail in this Final EIS, the Applicants reached a negotiated agreement with Joliet. Therefore, SEA has not considered mitigation for Woodruff Road.

Washington Street, Joliet, Illinois

This two-lane undivided arterial runs east/west and crosses the EJ&E rail line east of the city center. SEA has designated the Washington Street crossing as substantially affected because it would exceed the 2015 total vehicle delay threshold, and its LOS would be reduced from A to F. Currently, the vehicle queue length of 1,550 feet affects westbound traffic to Elmhurst Cemetery, and blocks access to several residential streets and business' driveways. Eastbound traffic is queued to Akin Avenue, a residential road, and blocks access to both residential streets and driveways north and south of Washington Street. Under the Proposed Action, the queue length would increase to 2,371 feet and the total vehicle delay would grow to 9,879 minutes of delay per day (164 hours of delay per day). Traffic traveling eastbound would continue to be queued past Akin Avenue, blocking access to residents and businesses adjacent to it. Westbound traffic would continue to be queued to Elmhurst Cemetery. Commuters in Joliet have no reasonable alternative routes during a train pass. The nearest grade-separated crossings at Interstate 80 and Cass Street are 0.5 miles north and south on the EJ&E rail line. These crossings are and would remain difficult to access because there are minimal through and connecting streets in the surrounding area. The Applicants have reached a negotiated agreement with Joliet. Therefore, SEA has not considered mitigation for Washington Street.

Western Avenue, Park Forest, Illinois

Western Avenue is a five-lane arterial running north/south. Currently, the vehicle queue length of 528 feet holds southbound traffic past South Street, a minor road, and also blocks access to several business' driveways. Under the Proposed Action, the queue length would increase to 863 feet and total vehicle delay would exceed the threshold. Under the Proposed Action, southbound traffic would continue to be queued past South Street to North Street, and would block access to South Street and adjacent businesses. Commuters in Park Forest would be able to use North Street and Westwood Drive to access Orchard Drive as an alternative route. Western Avenue would be a substantially affected crossing because forecasted delay would be 2,727 minutes, thus exceeding the 40 vehicle hours (2,400 minutes) per day in 2015.

Chicago Road, Chicago Heights, Illinois

Chicago Road Chicago Road/IL 1, a four-lane divided arterial that runs north/south crossing the EJ&E rail line, connects two arterials, 26th Street and 14th Street/US 30. Currently the vehicle queue

length of 718 feet holds northbound traffic through 24th Street and, at times, blocks this intersection. Southbound traffic queues through 21st Street and Main Street, at times blocking these intersections. Under the Proposed Action, the queue length increases to 1,091 feet and delay increases to 4,596 minutes delay/day (77 hours delay/day). Northbound traffic traveling would continue to be queued past through 24th Street and now 25th Street, at times blocking access to those streets from adjacent neighborhoods. Commuters in Chicago Heights can use Butler Avenue as an alternate route during a train pass. Butler Avenue is a grade-separated crossing 0.5 miles east of Chicago Road. Chicago Road is a substantially affected crossing because total vehicle delay in 2015 would be 4,596 minutes, which would exceed the 40 vehicle hours (2,400 minutes) per day threshold.

Lincoln Highway (US 30), Lynwood, Illinois

Lincoln Highway is a 4-lane divided arterial that runs north/south at the EJ&E highway/rail crossing located near the state line of Illinois and Indiana. As noted by CMAP, Lincoln Highway (US 30) is a Strategic Regional Arterial (CMAP 2008). This designation reflects the importance of Lincoln Highway (US 30) to the region's mobility. The intersection of Lincoln Highway (US 30) and Sauk Trail is located 850 feet south of the highway/rail crossing. Under the Proposed Action, the queue length would be approximately 940 feet. Sauk Trail forms a 'T' intersection into Lincoln Highway. The queue length would block traffic movement at the left turn from northbound Lincoln Highway to westbound Sauk Trail, and from eastbound Sauk Trail to northbound Lincoln Highway. Under the Proposed Action, this crossing would be substantially affected because the queue length would block Sauk Trail, a major thoroughfare, and the projected total vehicle traffic delay of 3,034 minutes, would exceed the 2,400 minute per day threshold.

Broad Street, Griffith, Indiana

Broad Street is a two-lane undivided arterial road that runs north/south and serves residential areas on both sides of the affected crossing. It is crossed by several rail lines, including EJ&E, CN, connectors, and leads. Broad Street forms a 'T' intersection at 73rd Avenue, about two miles south of the EJ&E highway/rail crossing. SEA projects that by 2015, the crossing would experience a total vehicle delay of 6,090 minutes per day, exceeding the 2,400-minute threshold.

2.5.5 Crossings No Longer Designated as Substantially Affected

The Draft EIS listed 16 crossings that would be substantially affected by the Proposed Action (See Table 4.3-10 in the Draft EIS). SEA reanalyzed these crossings using updated ADTs and train data and found that five of the crossings would either no longer be expected to exceed the total vehicle delay threshold of 2,400 minutes per day, or would not exceed SEA's queue length threshold. Therefore, SEA concluded that it would not consider mitigation for these crossings. These five crossings are discussed below. IL 60/83 was also reanalyzed.

Allanson Road, Mundelein, Illinois

The Draft EIS stated that Allanson Road would experience at least 40 hours of total vehicle delay in a 24-hour period under the Proposed Action. As a result, the Applicants modified the proposed connection at Leithton to increase train speeds through the connection and reduce delays at Allanson Road and IL 60/83 in Mundelein. See a description of the Revised Double Track – Leithton Connection in 2.2 above. SEA used the updated train speed data provided by the Applicants to reanalyze this crossing and determined that the increased train speeds would reduce the traffic delay effects at Allanson Road to below the 40-hour total delay threshold. Therefore, SEA concludes that Allanson Road would not be substantially affected by the Proposed Action and does not recommend any mitigation for this crossing in this Final EIS.

IL 60/83, Mundelein, IL

SEA received comments indicating that total vehicle delay at IL 60/83 exceeded the 40 hours per day and that it should have been included as a substantially affected crossing in the Draft EIS. Using the traffic volumes and train operation information available in the Draft EIS, SEA reanalyzed the IL 60/83 data, and determined that it would be considered a substantially affected crossing. However, since publication of the Draft EIS, the Applicants have revised the connection at Leithton to increase projected train speeds at the IL 60/83 crossing and thereby reduce potential vehicle delays. The increased train speed at IL 60/83 would decrease total vehicle delays below the 40 hour (2,400 minutes) per day threshold. Therefore, SEA concludes that IL 60/83 is not a significantly affected crossing.

Ela Road, Lake Zurich, Illinois

The Draft EIS concluded the crossing at Ela Road would have a queue length long enough to block Old Rand Road when a train under the Proposed Action blocked the crossing. Old Rand Road is a major thoroughfare within Lake Zurich. SEA reanalyzed this crossing using updated ADTs, which revealed that vehicles currently queue through Old Rand Road when a train blocks the crossing. Although Ela Road meets the threshold for queue length, it is the result of a pre-existing condition and therefore, would not be caused by the Proposed Action. Therefore, SEA determined that Ela Road would not be substantially affected by the Proposed Action and does not recommend any mitigation for this crossing in this Final EIS.

Liberty Street, near Aurora, Illinois

The Draft EIS stated that Liberty Street would experience at least 40 hours of total vehicle traffic delay in a 24-hour period under the Proposed Action. SEA used an updated ADT to reanalyze this crossing and found that the reduction in the ADT moved Liberty Street below the 40-hour total vehicle delay threshold. Therefore, SEA determined that Liberty Street would not be substantially affected by the Proposed Action and does not recommend any mitigation for this crossing in this Final EIS.

135th Street, near Plainfield, Illinois

The Draft EIS concluded that a train occupying the 135th Street crossing would result in a total queue length that would block Lincoln Highway, a major thoroughfare in Plainfield. For this Final EIS, SEA reanalyzed this crossing using updated ADTs and found that vehicles currently queue through Lincoln Highway during a train pass. Although 135th Street meets the threshold for queue length, it is the result of an existing condition and not the result of the Proposed Action. Therefore, SEA determines that 135th Street would not be substantially affected by the Proposed Action and does not recommend any mitigation for this crossing in this Final EIS.

Cicero Avenue, near Matteson, Illinois

The Draft EIS indicated that Cicero Avenue would exceed the 40-hour threshold for total vehicle traffic delay as a result of the Proposed Action. The Applicants modified the proposed connection at Matteson which would increase train speeds through the connection and reduce delays at Cicero Avenue, Western Avenue, and Main Street. See discussion of the Revised Matteson Connection in Section 2.1, above. SEA reanalyzed this crossing using the updated train speeds and found the increased speeds place Cicero Avenue below the threshold. Therefore, SEA determines that Cicero Avenue would not be substantially affected by the Proposed Action and does not recommend any mitigation for this crossing in this Final EIS.

2.5.6 Substantially Affected Crossings that Require No Mitigation

SEA analyzed 88 highway/rail at-grade crossings along the EJ&E and 134 highway/rail at-grade crossings along the affected CN rail lines for the Final EIS to identify any that could be substantially affected by the Proposed Action. Of the original 16 substantially affected crossings presented in the Draft EIS, SEA's additional analyses for this Final EIS showed that five crossings from the Draft EIS list should be removed and that two crossings should be added. This resulted in 13 crossings being designated as substantially affected by the Proposed Action in this Final EIS. Using updated information, including the recently obtained updated ADTs and train data, SEA concludes that five of the 13 crossings designated as substantially affected do not warrant mitigation. These five crossings are discussed below.

Diamond Lake Road, Mundelein, Illinois

While SEA identified Diamond Lake Road as a substantially affected crossing due to Proposed Action queue lengths, SEA concluded that during a train pass, vehicles would be able to turn from Diamond Lake Road onto eastbound IL 60/83 under the Proposed Action. When a train passes through the Diamond Lake Road at-grade crossing, the IL 60/83 at-grade crossing is also blocked by the same train because of the proximity of the two at-grade crossings. All vehicle movements, with the exception of the northbound Diamond Lake Road right turn, would be blocked as a result of a train crossing through the Diamond Lake Road and IL 60/83 at-grade crossings. As mentioned above, when a train passes and vehicles on Diamond Lake approach the EJ&E crossing, the queue would build and eventually block traffic waiting to turn left from IL 60/83 NW to drive south on Diamond Lake Road. The Diamond Lake approach south of the intersection with IL 60/83 has a dedicated right-turn lane that is approximately 500 feet in length, 200 feet longer than the Proposed Action queue length beyond IL 60/83. The dedicated right turn lane allows the only turning movement that would be possible during a train pass to remain open regardless of queue length due to the configuration of IL 60/83 and Diamond Lake Road. For this reason, SEA did not propose mitigation for Diamond Lake Road.

Montgomery Road/83rd Street, Aurora, Illinois

Montgomery Road is a substantially affected crossing under the Proposed Action because total traffic delay would exceed SEA's designated threshold of 40 vehicle hours per day. However, the Proposed Action would not affect Montgomery Road's queue length or its crossing LOS, which would be rated B. In addition, vehicles using Montgomery Road would have an alternate route created by mitigation SEA is recommending in Chapter 4 for Ogden Avenue. Montgomery Road also is less than a mile south of the Ogden Avenue at-grade crossing. For these reasons, SEA has not proposed mitigation for Montgomery Road.

Western Avenue, Park Forest, Illinois

Western Avenue is a substantially affected crossing under the Proposed Action because total traffic delay would exceed 40 vehicle hours per day. While SEA used total vehicle delay as a major consideration in considering whether its mitigation is warranted, it was not the only factor. In this case, the Applicants revised the proposed Matteson connection to increase train speeds and reduce potential effects at Western Avenue. The Proposed Action would not affect Western Avenue's queue length or its crossing LOS, which would be rated B. For these reasons, SEA has not proposed mitigation for Western Avenue.

Chicago Road, Chicago Heights, Illinois

Chicago Road is a substantially affected crossing under the Proposed Action because total delay would exceed SEA's designated threshold of 40 vehicle hours per day. While SEA used total vehicle

delay as a major consideration in making its mitigation recommendations, it was not the only factor. The Proposed Action would not affect Chicago Road's queue length or its crossing LOS, which would be rated C. For these reasons, SEA did not propose mitigation for Chicago Road.

Broad Street, Griffith, Indiana

Broad Street is a substantially affected crossing under the Proposed Action because total traffic delay would exceed SEA's designated threshold of 40 vehicle hours per day. While SEA used total vehicle delay as a major consideration in making its mitigation recommendations, it was not the only factor. Broad Street would not experience queue length affects and the crossing LOS would be B under the Proposed Action. There are currently seven railroad tracks at this crossing, reflecting existing crossing delays that are not caused solely by the EJ&E trains. Therefore, SEA does not believe mitigation for Broad Street is warranted.

Although the crossings described above would be affected by the Proposed Action, they are in communities that currently experience traffic congestion that is not solely caused by EJ&E trains. Rather, much of the congestion is caused by increasing development, other freight rail lines, and commuter trains that operate in the affected communities. It is the Board's practice not to require applicants to mitigate pre-existing conditions.

2.5.7 Substantially Affected Crossings Recommended for Mitigation

Based on the information above, the following substantially affected crossings warrant consideration for mitigation:

- Old McHenry Road, Lake Zurich, Illinois
- Main Street, Lake Zurich, Illinois
- Hough Street (IL 59), Barrington, Illinois
- Ogden Avenue (US 34), Aurora, Illinois
- Plainfield – Naperville Road, Plainfield, Illinois
- Woodruff Road, Joliet, Illinois
- Washington Street, Joliet, Illinois
- Lincoln Highway (US 30), Lynwood, Illinois

Chapter 4 of this Final EIS discusses recommended mitigation in detail. SEA listed a menu of mitigation options in the Draft EIS that have been narrowed down to specific mitigation measures for specific crossings. As discussed in Section 4.2.3, recommended mitigation includes traffic advisory signs, voluntary mitigation under the Joliet agreement, and grade separations.

2.5.8 Updated Vehicle Delays

SEA's updated analyses of the 88 affected EJ&E and 134 affected CN crossings resulted in changes to Total Vehicle Traffic Delay as shown in the Table 2.5-1, below, in which revised information is shown in red.

SEA used these changes to evaluate the potential effects of the Proposed Action and the associated new construction on roadway traffic and transportation systems.

Table 2.5-1. Total Vehicle Delays				
	No-Action (hours/day)[a]	Proposed Action (hours/day)[a]	No-Action (hours/year)[b]	Proposed Action (hours/year)[b]
EJ&E	274	1,953	99,967	712,878
CN	1,620	297	591,462	108,335
Total	1,894	2,250	691,429	821,213
Difference	356 hours		129,784 hours	

Notes:
[a] Values for hours/day are rounded to the nearest whole number.
[b] Values for hours/year = non-rounded hours/day x 365 days/year.

2.5.9 Potential Effects on Regional Mobility

In this Final EIS, SEA assessed the potential effects of the Proposed Action on regional mobility by considering the combined effects of roadway LOS and queue lengths. SEA compared the results of its original analyses of the 13 substantially affected crossings with its updated analyses for both LOS and queue length under the No-Action and the Proposed Action Alternatives to measure regional mobility in 2015. The results of SEA's analyses are presented in Table 2.5-2 and Table 2.5-3, below, in which revised information is shown in red.

Table 2.5-2. Substantially Affected Highway/Rail At-Grade Crossing LOS under No-Action and Proposed Action Alternatives (Year 2015)					
Illinois County	Street	2015 ADT	Level of Service		
			Roadway	Crossing, No-Action (2015)	Crossing, Proposed Action (2015)
Lake	Diamond Lake Road	6,207	C	A	A
Lake	Old McHenry Road	32,429	F	A	A
Lake	Main Street	7,474	B	A	B
Lake	Hough Street (IL 59)	22,549	F	A	A
Du Page	Ogden Avenue (US 34)	46,110	F	A	B
DuPage	Montgomery Road/ 83rd Street	27,131	F	A	B
Will	Plainfield/Naperville Road	8,117	B	A	B
Will	Woodruff Road	10,659	E	B	F
Will	Washington Street	11,714	C	A	F
Cook	Western Avenue	24,717	D	A	B
Cook	Chicago Road	23,390	D	A	C
Cook	Lincoln Highway (US 30)	29,237	E	A	B
Lake, IN	Broad Street	19,572	F	A	B

Table 2.5-3. Substantially Affected Highway/Rail At-Grade Crossing Queue Length under No-Action and Proposed Action Alternatives (Year 2015)						
Illinois County	Street	2015 ADT	Queue Length (feet)		Major Thoroughfare Blocked due to Proposed Action	Does Total Vehicle Traffic Delay (24-hr) Exceed 40 Hours?
			No-Action	Proposed Action		
Lake	Diamond Lake Road	6,207	265	466	IL 60 & 83	No
Lake	Old McHenry Road	32,429	641	1,186	Midlothian Street	Yes
Lake	Main Street	7,474	310	577	Church Street and IL 22	No
Lake	Hough Street (IL 59 & 63)	22,549	760	1,404	Northwest Highway	No
DuPage	Ogden Avenue (US 34)	46,110	1,083	1,330	None[b]	Yes
DuPage	Montgomery Road/83rd Street	27,131	1,274	1,597	None[b]	Yes
Will	Plainfield/Naperville Road	8,117	332	438	Division Street (IL 59)	No
Will	Woodruff Road	10,659	1,056	1,814	None[a]	Yes
Will	Washington Street	11,714	1,550	2,371	None [a]	Yes
Cook	Western Avenue	24,717	528	863	None[b]	Yes
Cook	Chicago Road	23,390	718	1,091	None[b]	Yes
Cook	Lincoln Highway (US 30)	29,237	634	939	Sauk Trail	Yes
Lake, IN	Broad Street	19,572	1,311	1,916	None[b]	Yes

Notes:

a Queues on Woodruff Road and Washington Street would increase as a result of the Proposed Action and block local streets, but are not expected to block any major thoroughfares. SEA determined that Woodruff Road and Washington Street would be substantially affected by the increased vehicle delay and the related decreased LOS at the crossing.

b Queues on these roadways would increase as a result of the Proposed Action and block local streets, but not expected to block any major thoroughfares. SEA determined that these roadways would be substantially affected by vehicle delay exceeding 40 hours per day.

2.5.10 Signalized Intersections

During the comment period following publication of the Draft EIS, SEA received comments from the Illinois Commerce Commission (ICC) concerning the proximity of signalized intersections (that is, the location of traffic lights in relation to the tracks) to the EJ&E rail line. The ICC was concerned about highway/rail crossings where the distance from a signalized intersection to the railroad line is less than that of the queue length that would be caused by a passing train under the Proposed Action.

There are two vehicle queue length conditions that can affect a roadway: railroad crossing queuing and signalized intersection queuing. Vehicle queuing at a railroad crossing takes place when a train passes. Where a crossing has automatic gates, railroad queuing is a direct result of the gates being down at the crossing and vehicles lining up behind them on either side of the roadway. Vehicle queuing takes place at a signalized intersection when a traffic signal is red. The ICC is concerned that the distance from the signalized intersection to the railroad at-grade crossing is less than the signalized intersection's queue length.

Railroad crossing queuing becomes signalized intersection queuing when vehicles in line waiting for a train to pass are released and proceed to the signalized intersection in a long platoon all at once. This platoon of vehicles that had been waiting for the train, must now move up to the signalized intersection and wait for the traffic signal to change. The platoon of vehicles may be longer than the distance from the signalized intersection to the railroad tracks causing some vehicles to stop on or near the tracks. When a track is heavily used or double tracked, this would be dangerous.

To quantify the potential queuing problems that could arise at such crossings under the Proposed Action, SEA reviewed all of the grade crossings on the EJ&E and CN affected rail lines. In preparing this Final EIS, SEA identified 17 roadways along the EJ&E rail line where the distance from the tracks to the signalized intersection is less than 1,000 feet. Main Street and Old Rand Road in Lake Zurich, Illinois as well as Western Avenue in Park Forest, Illinois currently experience signalized intersection affects on both sides of the EJ&E rail line that would increase under the Proposed Action.

Of the 17 roadways SEA identified:

- Five roadways have pre-existing conditions where queuing from the traffic signal is currently longer than the distance from the traffic signal to the tracks. The five locations with this pre-existing spill-over queuing are:
    - Diamond Lake Road, Mundelein, Illinois
    - Lake Cook Road/Main Street, Barrington, Illinois
    - Penny Road, Near Barrington, Illinois
    - Ogden Avenue (US 34), Aurora, Illinois
    - 127th Street, Plainfield, Illinois
- Two of these five locations have traffic signals that are tied to the automatic crossing gates and therefore, protect against vehicles queuing onto the track. These locations are Penny Road and 127th Street.
- Two of the 17 roadways would experience a 2015 queue length greater than the distance from the tracks to the signalized intersection under the No-Action alternative. These two roadways would also have a 2015 peak hour queue length longer than the distance from the tracks to the signalized intersection under the Proposed Action. These two locations are:
    - IL 60/83, Mundelein, Illinois
    - Broad Street, Griffith, Indiana
- Ten of the 17 roadways would have 2015 peak-hour queue lengths less than the distance from the tracks to the signalized intersection under the No-Action Alternative. These 10 locations would have a peak hour 2015 queue length greater than the distance from the tracks to the signalized intersection under the Proposed Action. Thus, these 10 intersections would only be potentially affected by the Proposed Action. These 10 roadways are:
    - Old McHenry Road, Lake Zurich, Illinois
    - Main Street, Lake Zurich, Illinois
    - Old Rand Road, Lake Zurich, Illinois
    - Ela Road, Lake Zurich, Illinois
    - Hough Street (IL 59), Barrington, Illinois
    - 135th Street, Plainfield, Illinois
    - Plainfield-Naperville Road, Plainfield, Illinois
    - Main Street, Plainfield, Illinois
    - Western Avenue, Park Forest, Illinois

- Lincoln Highway, Lynwood, Illinois

SEA found 62 roadways along the affected CN subdivisions where the distance from the at-grade crossing to the signalized intersection is less than 1,000 feet. The Proposed Action would remove trains from the CN subdivisions and reduce the Proposed Action queue lengths. Of the 62 roadways, 22 would have Proposed Action queue lengths that are shorter than the distance from the signalized intersection to the crossing in 2015.

While the Proposed Action would result in a higher frequency of trains on the EJ&E, on average, less than two trains per hour would pass through most affected crossings, with some crossings experiencing less than one train per hour. SEA concluded that a typical signalized intersection cycle length of 90 seconds would allow a group of vehicles queued at a signalized intersection to dissipate before another train passed through the crossing. Therefore, SEA did not propose mitigation for the signalized intersections that would experience increased queuing during a train pass at an affected crossing.

Chapter 4 of the Final EIS includes SEA's recommended mitigation for affected EJ&E crossings that are less than 1,000 feet from one or more signalized intersections.

2.5.11 Barrington Area Traffic Study

During the public meetings and public comment process, SEA received numerous comments about the Barrington area congestion issue. These comments indicated frustration with existing traffic congestion and the additional congestion anticipated as a result of the Proposed Action.

Because of high levels of interest, the volume of comments, and the fact that, as described in the Draft EIS, Barrington has unique traffic issues, SEA decided to perform additional traffic analysis of the Barrington area. The traffic analysis was performed to:

1) Validate the analysis in the Draft EIS.
2) Better understand the infrastructure of the local roadways and the effects of the existing railroad crossings.
3) Evaluate possible mitigation strategies for Hough Street.

The traffic analysis, provided in Appendix A, documents the study methodology and evaluation of existing and future traffic operations in the Village of Barrington, Illinois. Three corridors have been identified for analysis to assess area mobility: Northwest Highway, Main Street/Lake Cook Road, and Hough Street. These three corridors serve a majority of traffic in the Barrington area and have at-grade crossings with the EJ&E rail line.

The purpose of this study was to use a high-level, traffic simulation model to evaluate existing and future traffic conditions on Northwest Highway, Main Street/Lake Cook Road, and Hough Street corridors.

Two rail lines, the EJ&E and the Union Pacific/Northwest Line, intersect in downtown Barrington. Vehicles in the study corridors experience delays because of train movements at the highway/rail at-grade crossings with these two rail lines. The Proposed Action by CN would result in an increase in the number of freight trains traveling through Barrington by the year 2015. SEA developed three models to quantify the effects of the Proposed Action on automobile traffic in the Barrington area:

- 2008 Existing Conditions
- 2015 No-Action
- 2015 Proposed Action

These models evaluate intersection operations under the above scenarios and provide several measures to document traffic operations in the corridors, as presented in Appendix A of this Final EIS.

A traffic simulation model allows the prediction of the effects of modified lane configurations, traffic control and any changes made in the transportation system on the system's operational performance. Operational performance is measured in terms of Measures of Effectiveness (MOEs), which include average vehicle speed, vehicle stops, delays, vehicle hours of travel, vehicle miles of travel, fuel consumption, and several other measures. The MOEs provide useful input in the selection of future alternative improvements to handle issues related to traffic such as traffic congestion, delay, queues, etc.

The No-Action Alternative assumed no modifications to the train patterns on the EJ&E rail line while the Proposed Action alternative assumed one of the additional trains would be added on the EJ&E rail line during both the AM and PM peak hours. The peak hour was simulated to represent a time period with higher expected traffic volumes and resulting congestion. SEA believes that this a conservative assumption because the Applicants have proposed two volunteer mitigation measures (VM 38 and VM 41), which would serve to give priority to passenger trains and would likely limit the ability of the Applicants to operate freight trains through Barrington during the peak commuter train AM and PM operating periods.

The results of the Village of Barrington Traffic Operational Analysis show that the increase in train traffic on the EJ&E rail line will likely have some effects on traffic congestion in Barrington. Under the Proposed Action scenario, Barrington area total delay time increased by four percent and five percent during the AM and PM peak periods, respectively, over the No-Action scenario. Individual intersection levels of service, however, did not degrade under the Proposed Action scenario.

The results of the traffic analysis are discussed in Chapter 4 and further details of the traffic analysis are presented in Appendix A of this Final EIS.

The traffic analysis also validated SEA's methodology for evaluating traffic delay and mobility effects. In general, the results of the traffic analysis confirmed the conclusions that SEA reached in the Draft EIS.

2.6 Emergency Services

Section 4.3.3 of the Draft EIS describes the potential effects of the Proposed Action on emergency service providers. SEA determined that the Proposed Action could potentially affect emergency service providers by increasing the potential delay at highway/rail at-grade crossings due to a change in train operations. As explained in the Draft EIS, SEA established screening criteria to determine whether or not the Proposed Action would potentially substantially affect emergency service facilities. Criteria for this examination included whether the emergency service facility:

- Was located within two miles of the EJ&E rail line
- Was located within two miles of at least one public highway/rail at-grade crossing and more than one mile from a public grade-separated crossing
- Was situated outside a reasonable distance of a similar facility on the opposite side of the EJ&E rail line

Emergency service facilities meeting these criteria were evaluated to determine if, because of the Proposed Action, the emergency service provider would either:

- Incur an increased average delay per delayed vehicle of 30 seconds (or more) at a highway/rail at-grade crossing

- Incur an increase of 30 minutes (or more) in the total time that a highway/rail at-grade crossing used by the provider would be blocked in a 24-hour period

SEA considered both of these scenarios as a substantial effect. As discussed in Section 4.3.3.5 of the Draft EIS, SEA identified 11 facilities (nine fire protection facilities and two hospitals) that were considered to be potentially substantially affected by the Proposed Action. See Table 2.6-1, below. In the Draft EIS (Chapter 6), SEA listed potential mitigation options for these 11 facilities.

During the comment period of the Draft EIS, SEA received comments from the public identifying several other emergency service facilities as having the potential to be substantially affected. In response to the comments, SEA screened all of the facilities suggested in the comments and identified 10 other emergency service facilities that warranted additional analysis (Figures 2.6-1 through 2.6-7, below). In this Final EIS, SEA conducted additional analysis to determine if these facilities would be potentially substantially affected by the Proposed Action. SEA determined that three of these 10 facilities would be potentially substantially affected.

Table 2.6-1. Substantially Affected Emergency Service Providers Identified in Draft EIS

Community	Facility	Draft EIS Figure No.
Mundelein, Illinois	Countryside Fire Protection District - Station No. 1	Figure 4.3-13
Lake Zurich, Illinois	Lake Zurich Rural Fire Protection District - Station No. 3	Figure 4.3-14
Barrington, Illinois	Barrington Fire Department - Station No. 1	Figure 4.3-15
Bartlett, Illinois	Bartlett Fire Protection District - Future Station No. 3	Figure 4.3-16
Plainfield, Illinois	Plainfield Fire Protection District - Station No. 3	Figure 4.3-17
Joliet, Illinois	Joliet Fire Department - Station No. 8	Figure 4.3-18
Olympia Fields, Illinois	Saint James Hospital and Health Centers - Olympia Fields	Figure 4.3-19
Chicago Heights, Illinois	Saint James Hospital and Health Centers - Chicago Heights	Figure 4.3-20
Schererville, Indiana	Schererville Fire Department Headquarters	Figure 4.3-21
Griffith, Indiana	Griffith Volunteer Fire Department Headquarters/Station No. 1	Figure 4.3-22
Griffith, Indiana	Griffith Volunteer Fire Department - Station No. 2	Figure 4.3-22

Table 2.6-2. Additional Potentially Affected Emergency Service Providers Identified during the Draft EIS Comment Period

Community	Facility	Final EIS Figure No.
Barrington, Illinois	Advocate Good Shepherd Hospital	Figure 2.6-1

West Chicago, Illinois	West Chicago Fire Protection District Headquarters/Station No. 1	Figure 2.6-2
West Chicago, Illinois	West Chicago Fire Protection District - Station No. 3	Figure 2.6-2
Naperville, Illinois	Edward Hospital	Figure 2.6-3
Aurora, Illinois	Rush-Copley Medical Center	Figure 2.6-4
Plainfield, Illinois	Edward Plainfield Outpatient Center & Immediate Care	Figure 2.6-5
Joliet, Illinois	Silver Cross Hospital	Figure 2.6-6
New Lenox, Illinois	New Lenox Fire District Headquarters/Station No. 1	Figure 2.6-7
New Lenox, Illinois	New Lenox Fire District - Station No. 3	Figure 2.6-7
New Lenox, Illinois	Silver Cross Replacement Hospital	Figure 2.6-7

2.6.1 Emergency Service Provider Evaluations

In response to the Draft EIS comments, SEA performed additional evaluations related to each of the eleven facilities originally identified in the Draft EIS and discussed the ten new facilities identified during the Draft EIS comment period. Once all potentially substantially affected facilities were identified, SEA contacted the service providers by phone, and meetings were arranged to discuss operational issues with those service providers expressing interest in discussing the Proposed Action. Meeting discussion topics included: service area covered; emergency service routes; existing communication technologies and existing procedures for emergency service vehicles at blocked highway/rail at-grade crossings. Current procedures for emergency service responders arriving at a blocked highway/rail at-grade crossing include waiting for the train to pass, notifying the emergency dispatch center to send another emergency vehicle to respond, notifying a neighboring community's emergency service responder and asking for assistance, and utilizing alternative or detour routes. During these meetings SEA answered questions about the Draft EIS and the Proposed Action and mitigation strategies were discussed. Field inspections were conducted by SEA and emergency services routes from the potentially affected facility locations to the EJ&E rail line were examined.

GIS technology was utilized to review maps, service areas, and possible alternative routes. A discussion of facilities, their location, and the results of SEA's additional analysis follows. Mitigation is discussed in Chapter 4 of this Final EIS.

2.6.1.1 Countryside Fire Protection District - Station No. 1, Mundelein, Illinois

Countryside Fire Protection District – Station No. 1 is located within two miles of three highway/rail at-grade crossings along the EJ&E rail line (Diamond Lake Road, IL 60/83, and Gilmer Road) and four highway/rail at-grade crossings along the CN Waukesha Subdivision (Allanson Road, Hawley Street, Park Street, and Maple Avenue). The nearest grade-separated crossing along the EJ&E rail line is Lake Street (US 45), located approximately 1.5 miles southeast. The nearest grade-separated crossing along the CN Waukesha Subdivision is Countryside Highway/Courtland Street, located approximately 1.5 miles northeast. There are no grade-separated crossings along the EJ&E rail line to the south or southwest, and no fire stations are located south of the EJ&E rail line and west of the CN Waukesha Subdivision. This emergency service provider has no station to cover the area south of the

EJ&E rail line and west of the CN Waukesha Subdivision, there are limited crossing opportunities in the area, and it meets the criteria established by SEA to be considered substantially affected based on average delay per delayed vehicle and total time that a crossing would be blocked in a 24-hour period. Therefore, SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.2 Lake Zurich Rural Fire Protection District - Station No. 3, Lake Zurich, Illinois

Lake Zurich Rural Fire Protection District – Station No. 3 is located within two miles of four highway/rail at-grade crossings along the EJ&E rail line (Gilmer Road, Old McHenry Road, Oakwood Road, and Main Street). The nearest grade-separated crossing along the EJ&E rail line is IL 22, located approximately 2.5 miles southwest. There are no grade-separated crossings along the EJ&E rail line to the east or northeast, and no fire stations are located east of the EJ&E rail line. This service provider has no station to cover the area east of the EJ&E rail line, there are no highway/rail grade-separated crossings in the area, and it meets SEA's criteria to be considered substantially affected based on average delay per delayed vehicle and total time that a crossing would be blocked in a 24-hour period. Accordingly, SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.3 Barrington Fire Department - Station No. 1, Barrington, Illinois

The Barrington Public Safety Building, which houses the Barrington Fire Department – Station No. 1 and the Barrington Police Department, is located within two miles of six highway/rail at-grade crossings along the EJ&E rail line (Cuba Road, Lake Zurich Road, Northwest Highway (US 14), Hough Street (IL 59), Lake Cook Road/Main Street, and Otis Road). The nearest grade-separated crossing along the EJ&E rail line is Rand Road (US 12), located approximately 2.5 miles northeast. There are no grade-separated crossings along the EJ&E rail line to the west or southwest, and no fire stations are located west of the EJ&E rail line. This service provider has no station to cover the area west of the EJ&E rail line, and there are no highway/rail grade separated crossings in the area. Accordingly, it meets SEA's criteria to be considered substantially affected based on average delay per delayed vehicle and total time that a crossing would be blocked in a 24-hour period, SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.4 Bartlett Fire Protection District - Future Station No. 3, Bartlett, Illinois

Bartlett Fire Protection District – Future Station No. 3 will be located within two miles of three highway/rail at-grade crossings along the EJ&E rail line (Spaulding Road, West Bartlett Road, and Stearns Road) and one highway/rail at-grade crossings along the CN Freeport Subdivision (Powis Road). The nearest grade-separated crossing along the EJ&E rail line is Lake Street (US 20), located approximately 1.5 miles north. There are no grade-separated crossings along the EJ&E rail line to the west or southwest and no fire stations located west of the EJ&E rail line. Since this service provider has no station to cover the area west of the EJ&E rail line, and there are limited crossing opportunities in the area, it meets SEA's criteria to be considered substantially affected based on average delay per delayed vehicle and total time that a crossing would be blocked in a 24-hour period. As a result, SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.5 Plainfield Fire Protection District - Station No. 3, Plainfield, Illinois

Plainfield Fire Protection District – Station No. 3 is located within two miles of five highway/rail at-grade crossings along the EJ&E rail line (111th Street, Ferguson Road/119th Street, Normantown/252nd, 127th Street, and 135th Street). The nearest grade-separated crossing along the EJ&E rail line is IL 59, located approximately 3.5 miles southeast. There are no grade-separated

crossings along the EJ&E rail line to the north or west and no fire stations are located west of the EJ&E rail line. Since this service provider has no station to cover the area west of the EJ&E rail line, and there are no highway/rail grade separated crossings in the area, it meets SEA's criteria to be considered substantially affected based on total time that a crossing would be blocked in a 24-hour period. SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.6 Joliet Fire Department - Station No. 8, Joliet, Illinois

Joliet Fire Department – Station No. 8 is located within two miles of three highway/rail at-grade crossings along the EJ&E rail line (East Frontage Road/Essington Road, Division Street, and Gaylord Road). The nearest accessible grade-separated crossing along the EJ&E rail line is Caton Farm Road, located approximately 2 miles east. There are no grade-separated crossings along the EJ&E rail line to the north or northeast with the exception of I-55, which is inaccessible to the community northeast of the EJ&E rail line. Additionally there are no fire stations located northeast of the EJ&E rail line. Given the negotiated agreement Joliet and Applicants have executed, SEA has not recommended mitigation for this facility. SEA does, however, recommend that the Board impose mitigation requiring the Applicants to comply with the terms of the negotiated agreement (see Chapter 4).

2.6.1.7 Saint James Hospital and Health Centers - Olympia Fields, Olympia Fields, Illinois

Saint James Hospital and Health Centers – Olympia Fields is located within two miles of one highway/rail at-grade crossings along the EJ&E rail line (Main Street). The nearest grade-separated crossing along the EJ&E rail line is Governors Highway, located approximately 2 miles south. The nearest grade-separated crossing along the CN Chicago Subdivision is Lincoln Highway (US 30), located approximately 1.5 miles southeast. There are no emergency medical facilities located south of the EJ&E rail line. However, there are three grade-separated highway/rail crossings within a three mile radius of this facility that provide access from the south side of the EJ&E rail line to the north (Interstate 57, Governors Highway, and Orchard Drive). Accordingly, SEA has not recommended mitigation for this facility in this Final EIS.

2.6.1.8 Saint James Hospital and Health Centers - Chicago Heights, Chicago Heights, Illinois

Saint James Hospital and Health Centers – Chicago Heights is located within two miles of seven highway/rail at-grade crossings along the EJ&E rail line (Western Avenue, Euclid Avenue, Chicago Road, West End Avenue/Halsted Street, East End Avenue, Wentworth Avenue, and State Street). The closest accessible grade-separated crossing along the EJ&E rail line is Orchard Drive, located approximately 2.5 miles west. There are no other grade-separated crossings along the EJ&E rail line to the south, east, or west other than Butler Street. Butler Street has clearance restrictions that may not accommodate all emergency service apparatus. Therefore, SEA has assumed that this crossing could not be used by any emergency service responder. Additionally, there are no emergency medical facilities located south of the EJ&E rail line. Since there are no emergency medical facilities south of the EJ&E rail line, and there are no highway/rail grade separated crossings in the area, the facility meets SEA's criteria to be considered substantially affected based on average delay per delayed vehicle and total time that a crossing would be blocked in a 24-hour period. SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.9 Schererville Fire Department Headquarters, Schererville, Indiana

Schererville Fire Department Headquarters is located within two miles of two highway/rail at-grade crossings along the EJ&E rail line (Kennedy Avenue and Broad Street) and one highway/rail at-grade

crossings along the CN Elsdon/South Bend Subdivision (Colfax Street). The nearest grade-separated crossing along the EJ&E rail line is Indianapolis Boulevard (US 41), located approximately 2.5 miles northwest. There are no grade-separated crossings along the EJ&E rail line to the north and no fire stations located northwest of the EJ&E rail line. Since this service provider has no station to cover the area northwest of the EJ&E rail line, and there are limited crossing opportunities in the area, it meets SEA's criteria to be considered substantially affected based on average delay per delayed vehicle and total time that a crossing would be blocked in a 24-hour period. Accordingly, SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.10 Griffith Volunteer Fire Department Headquarters/Station No. 1, Griffith, Indiana

Griffith Volunteer Fire Department Headquarters/Station No. 1 is located within two miles of eight highway/rail at-grade crossings along the EJ&E rail line (Kennedy Avenue, Broad Street, East Main Street, East Lake Street, East Miller Street, East Elm Street, East 45th Avenue, and East 40th Place) and four highway/rail at-grade crossings along the CN Elsdon/South Bend Subdivision (Kennedy Avenue, Main Street, Broad Street, and Colfax Street). The closest grade-separated crossing along the EJ&E rail line is Ridge Road (US 6), located approximately 2 miles north. Additionally, there are no grade-separated crossings along the EJ&E rail line to the east or south. The Griffith Volunteer Fire Department is an all volunteer department, which is not fully staffed 24 hours a day. Some volunteer firefighters may need to cross the EJ&E rail line to report to the fire station or to respond to an emergency call. Though this service provider has stations north and south of the EJ&E rail line, there is not one east of the rail line to cover the eastern portion of Griffith. For these reasons, this service provider meets SEA's criteria to be considered substantially affected based on average delay per delayed vehicle and total time that a crossing would be blocked in a 24-hour period. SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.11 Griffith Volunteer Fire Department - Station No. 2, Griffith, Indiana

Griffith Volunteer Fire Department – Station No. 2 is located within two miles of seven highway/rail at-grade crossings along the EJ&E rail line (Kennedy Avenue, Broad Street, East Main Street, East Lake Street, East Miller Street, East Elm Street, and East 45th Avenue) and three highway/rail at-grade crossings along the CN Elsdon/South Bend Subdivision (Main Street, Broad Street, and Colfax Street). The nearest grade-separated crossing along the EJ&E rail line is Indianapolis Boulevard (US 41), located approximately 2.5 miles west. Additionally, there are no grade-separated crossings along the EJ&E rail line to the north. The Griffith Volunteer Fire Department is a volunteer fire department, which is not fully staffed 24 hours a day. Some volunteer firefighters may need to cross the EJ&E rail line to report to the fire station or to respond to an emergency call. Though this service provider has stations north and south of the EJ&E rail line, there is not one east of the rail line to cover the eastern portion of Griffith. Accordingly, this service provider meets SEA's criteria to be considered substantially affected based on average delay per delayed vehicle and total time that a crossing would be blocked in a 24-hour period, and SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.12 Advocate Good Shepherd Hospital, Barrington, Illinois

Advocate Good Shepherd Hospital is located within five miles of nine highway/rail at-grade crossings along the EJ&E rail line (Main Street, Old Rand Road, Ela Road, Cuba Road, Lake Zurich Road, Northwest Highway (US 14), Hough Street (IL 59), Lake Cook Road/Main Street, and Otis Road). See Figure 2.6-1. The nearest grade-separated crossing along the EJ&E rail line is Rand Road (US 12), located approximately 4 miles east. There are no grade-separated crossings along the EJ&E rail line to the south or southeast and no emergency medical facilities located southeast of the EJ&E rail line. Since there are no emergency medical facilities southeast of the EJ&E rail line and no

highway/rail grade separated crossings in the area, SEA believes mitigation for this facility is warranted; its proposed mitigation is discussed in Chapter 4 of this Final EIS.

2.6.1.13 West Chicago Fire Protection District Headquarters - Station No. 1, West Chicago, Illinois

West Chicago Fire Protection District Headquarters/Station No. 1 is located within two miles of five highway/rail at-grade crossings along the EJ&E rail line (Hawthorne Lane, Washington Street, Aurora Street, Church Street, and Ann Street). See Figure 2.6-2. The nearest grade-separated crossing along the EJ&E rail line is Roosevelt Road, located approximately 1.5 miles south. There are no grade-separated crossings along the EJ&E rail line to the west or northwest. While Station No. 3 is located on the west side of the EJ&E rail line, approximately 0.75 mile southwest, it is not staffed 24-hours per day and it may be necessary for staff from Headquarters/Station No. 1 to cross the tracks as a first responder. Due to this situation and the fact that there are limited east-west crossing opportunities, SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.14 West Chicago Fire Protection District - Station No. 3, West Chicago, Illinois

West Chicago Fire Protection District – Station No. 3 is located within two miles of five highway/rail at-grade crossings along the EJ&E rail line (Hawthorne Lane, Washington Street, Aurora Street, Church Street, and Ann Street). The nearest grade-separated crossing along the EJ&E rail line is Roosevelt Road, located approximately one mile southeast. There are no grade-separated crossings along the EJ&E rail line to the east or north. While Headquarters/Station No. 1 is located on the east side of the EJ&E rail line, approximately 0.75 mile northeast, Station No. 3 is not staffed 24-hours per day, and must rely on the Headquarters/Station No. 1 as a first responder in many instances. Due to this situation and the fact that there are limited east-west crossing opportunities, SEA has recommended mitigation for this facility, as discussed in Chapter 4 of this Final EIS.

2.6.1.15 Edward Hospital, Naperville, Illinois

Edward Hospital is located within five miles of four highway/rail at-grade crossings along the EJ&E rail line (Diehl Road, Liberty Street, Ogden Avenue (US 34), and Montgomery Road/83rd Street). See Figure 2.6-3. The nearest grade-separated crossing along the EJ&E rail line is New York Street/Naperville Road, located approximately 4.5 miles west. There are no grade-separated crossings along the EJ&E rail line to the southwest. However, Rush–Copley Medical Center is located approximately 2 miles due west of the rail line and 6.5 miles southwest of Edward Hospital, and could serve as an alternate emergency medical provider. For this reason, SEA does not recommend specific mitigation for this facility.

2.6.1.16 Rush-Copley Medical Center, Aurora, Illinois

Rush–Copley Medical Center is located within two miles of three highway/rail at-grade crossings along the EJ&E rail line (Montgomery Road/83rd Street, Keating Drive/87th Street, and Hafenrichter Road). See Figure 2.6-4. The nearest grade-separated crossing along the EJ&E rail line is McCoy Drive, located approximately 2.5 miles northeast. There are no grade-separated crossings along the EJ&E rail line to the east or southeast. However, Edward Hospital is located approximately 4.5 miles due east of the rail line and 6.5 miles northeast of Rush–Copley Medical Center, and could serve as an alternate emergency medical provider. For this reason, SEA does not recommend specific mitigation for this facility.

2.6.1.17 Edward Plainfield Outpatient Center & Immediate Care, Plainfield, Illinois

Edward Plainfield Outpatient Center & Immediate Care facility is located within two miles of five highway/rail at-grade crossings along the EJ&E rail line (Ferguson Road/119th Street, Normantown/252nd, 127th Street, 135th Street, and Van Dyke Road). See Figure 2.6-5. The nearest grade-separated crossing along the EJ&E rail line is State Route 59, located approximately 2.5 miles southeast. There are no grade-separated crossings along the EJ&E rail line to the north or west and no emergency medical facilities located west of the EJ&E rail line. However, this facility does not have an emergency room and so does not meet SEA's criteria to be considered as an emergency medical facility to be evaluated for the effects the Proposed Action would have on it. Furthermore, trauma patients are sent to Edward Hospital in Naperville, Illinois, for treatment. For this reason, SEA has not recommended specific mitigation for this facility.

2.6.1.18 Silver Cross Hospital, Joliet, Illinois

Silver Cross Hospital is located within two miles of three highway/rail at-grade crossings along the EJ&E rail line (Woodruff Road, Washington Street, and South Rowell Avenue) and two highway/rail at-grade crossings along the CN Joliet Subdivision (Ohio Street and Jackson Street). See Figure 2.6-6. The nearest grade-separated crossing along the EJ&E rail line is Jackson Street (US 6), located approximately 0.5 mile southwest. The nearest grade-separated crossing along the CN Joliet Subdivision is Cass Street (US 30 / US 6), located approximately 1.5 miles southwest. While there are other grade-separated crossings along the EJ&E rail line to the northwest and southwest, there are no emergency medical facilities west of the EJ&E rail line. Since there is a grade-separated highway/rail crossing approximately 0.5 mile southwest of this location, SEA has not recommended specific mitigation for this facility.

2.6.1.19 New Lenox Fire District Headquarters - Station No. 1, New Lenox, Illinois

New Lenox Fire District Headquarters/Station No. 1 is located within two miles of three highway/rail at-grade crossings along the EJ&E rail line (Nelson Road, Cedar Road, and Spencer Road). See Figure 2.6-7. The nearest grade-separated crossings along the EJ&E rail line are Interstate 80, located approximately 5 miles west, and South LaGrange Road (US 45), located approximately 5 miles southeast. Additionally, there are no grade-separated crossings along the EJ&E rail line to the south. Station No. 3 is, however, located approximately 500 feet south of the EJ&E rail line. The New Lenox Fire District operates out of four fire stations that are fully staffed, 24-hour facilities (Headquarters/Station No. 1, Station No. 2, and Station No. 4 are north of the EJ&E rail line; Station No. 3 is south of the EJ&E rail line). For this reason SEA does not recommend specific mitigation for this facility.

2.6.1.20 New Lenox Fire District - Station No. 3, New Lenox, Illinois

New Lenox Fire District – Station No. 3 is located within two miles of three highway/rail at-grade crossings along the EJ&E rail line (South Gougar Road, Nelson Road, and Cedar Road). See Figure 2.6-7. The nearest grade-separated crossings along the EJ&E rail line are Interstate 80, located approximately 4.5 miles northwest, and South LaGrange Road (US 45), located approximately 6 miles east. Additionally, there are no grade-separated crossings along the EJ&E rail line to the north. Headquarters/Station No. 1 is, however, located approximately 1.5 miles north of the EJ&E rail line. The New Lenox Fire District operates out of four fire stations that are fully staffed, 24-hour facilities (Headquarters/Station No. 1, Station No. 2, and Station No. 4 are north of the EJ&E rail line; Station No. 3 is south of the EJ&E rail line). For this reason SEA does not recommend specific mitigation for this facility.

2.6.1.21 Silver Cross Replacement Hospital, New Lenox, Illinois

Silver Cross Replacement Hospital, scheduled to open in mid-summer 2011, will be located near the intersection of US Route 6 and Interstate 355, and within five miles of six highway/rail at-grade crossings along the EJ&E rail line (Cherry Hill Road, South Gougar Road, Nelson Road, Cedar Road, Spencer Road, and Schoolhouse Road). See Figure 2.6-7. The nearest grade-separated crossings along the EJ&E rail line are Jackson Street (US 6), located approximately 5 miles west, and South LaGrange Road (US 45), located approximately 6.5 miles southeast. There are no grade-separated crossings along the EJ&E rail line to the south and no emergency medical facilities located south of the EJ&E rail line. Since this facility will be located approximately four miles north of the EJ&E rail line, outside the two-mile radius used for analysis, and is not scheduled to open for nearly three years, SEA does not recommend specific mitigation for this facility.

2.6.2 Conclusion

Of the initial 11 facilities identified in the Draft EIS as being potentially substantially affected, SEA proposes mitigation for ten. SEA does not propose mitigation for Saint James Hospital and Health Centers – Olympia Fields since there are three grade-separated highway/rail crossings within a three-mile radius of its location. The analysis performed on the additional ten facilities identified from comments received by SEA on the Draft EIS, resulted in three emergency service facilities that have been determined to be potentially substantially affected. Mitigation recommendations (VM 42-48, Condition 21, and a negotiated agreement with the City of Joliet) prepared by SEA for all 13 of these facilities can be found in Chapter 4 of the Final EIS. Table 2.6-3, below, lists the 13 facilities for which SEA has proposed mitigation.

Table 2.6-3. Substantially Affected Emergency Response Providers for which SEA will Propose Mitigation

Community	Facility	Proposed Mitigation
Mundelein, Illinois	Countryside Fire Protection District - Station No. 1	CCTV surveillance of highway/rail at-grade crossings
Lake Zurich, Illinois	Lake Zurich Rural Fire Protection District - Station No. 3	CCTV surveillance of highway/rail at-grade crossings
Barrington, Illinois	Barrington Fire Department - Station No. 1	CCTV surveillance of highway/rail at-grade crossings
Barrington, Illinois	Advocate Good Shepherd Hospital	CCTV surveillance of highway/rail at-grade crossings
Bartlett, Illinois	Bartlett Fire Protection District - Future Station No. 3	CCTV surveillance of highway/rail at-grade crossings
West Chicago, Illinois	West Chicago Fire Protection District Headquarters/Station - No. 1	CCTV surveillance of highway/rail at-grade crossings
West Chicago, Illinois	West Chicago Fire Protection District - Station No. 3	CCTV surveillance of highway/rail at-grade crossings
Plainfield, Illinois	Plainfield Fire Protection District - Station No. 3	CCTV surveillance of highway/rail at-grade crossings
Joliet, Illinois	Joliet Fire Department - Station No. 8	Negotiated agreement with City of Joliet
Chicago Heights, Illinois	Saint James Hospital and Health Centers - Chicago Heights	CCTV surveillance of highway/rail at-grade crossings

Schererville, Indiana	Schererville Fire Department Headquarters	CCTV surveillance of highway/rail at-grade crossings
Griffith, Indiana	Griffith Volunteer Fire Department Headquarters/Station No. 1	CCTV surveillance of highway/rail at-grade crossings
Griffith, Indiana	Griffith Volunteer Fire Department - Station No. 2	CCTV surveillance of highway/rail at-grade crossings

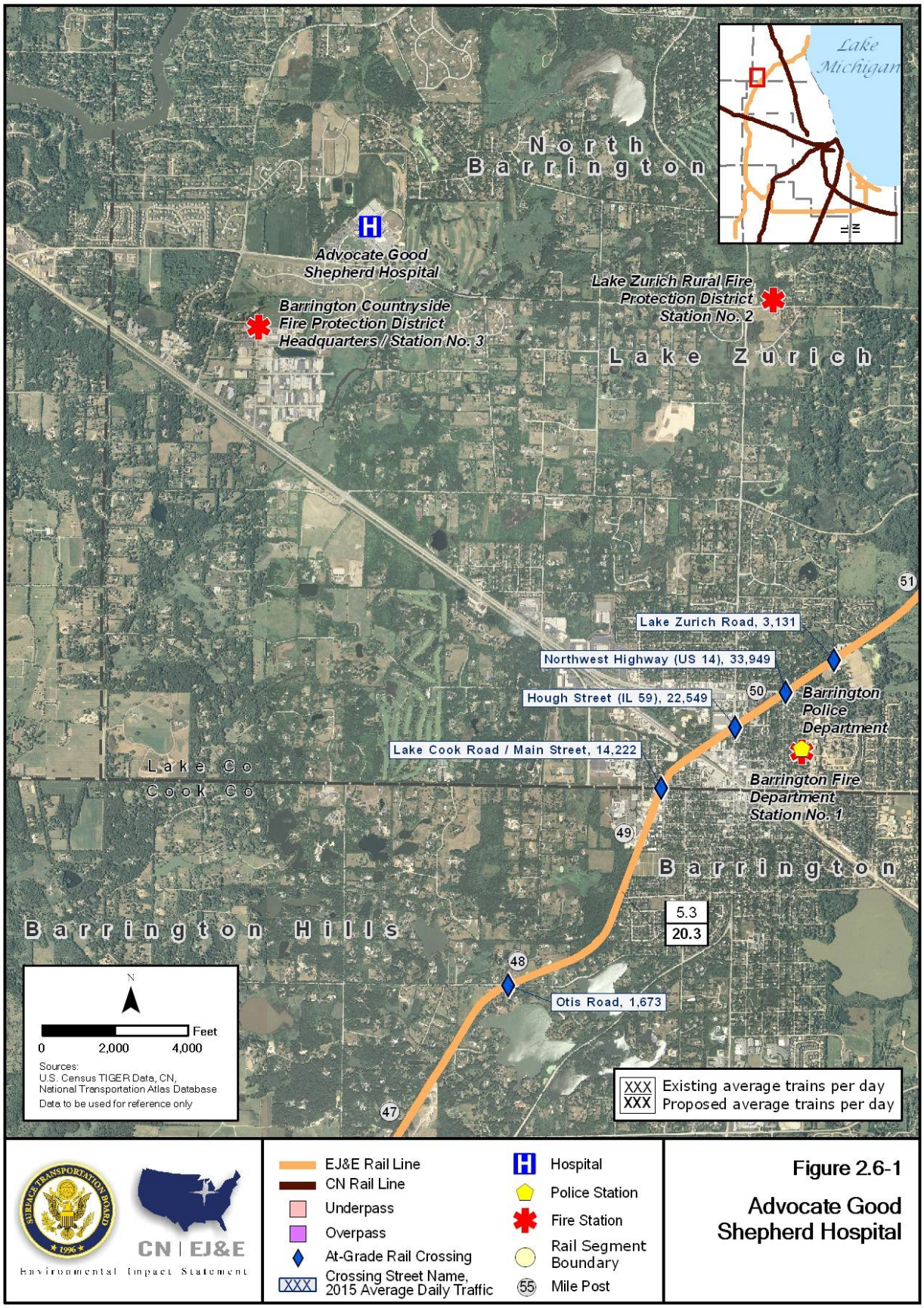
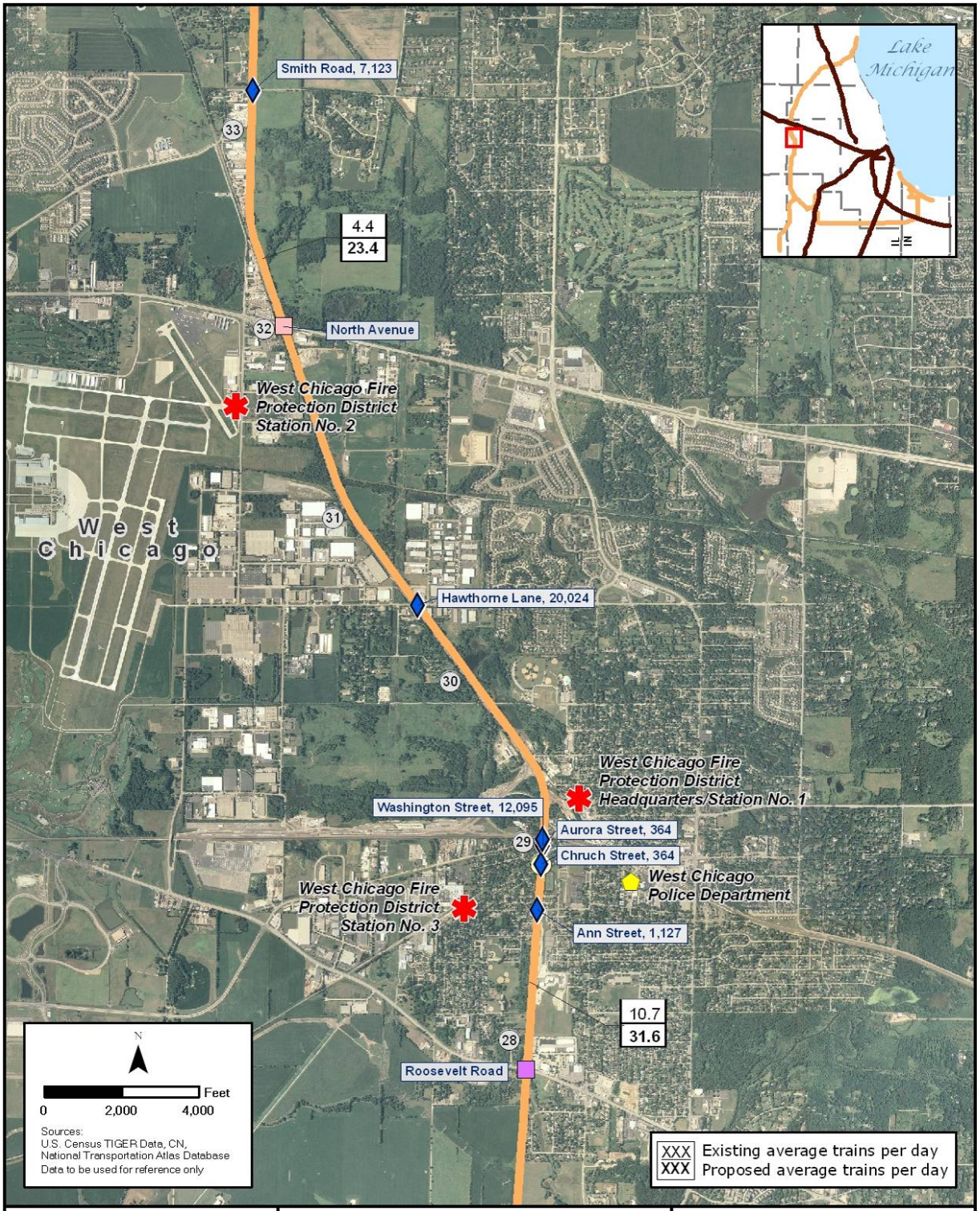


Figure 2.6-1

Advocate Good Shepherd Hospital

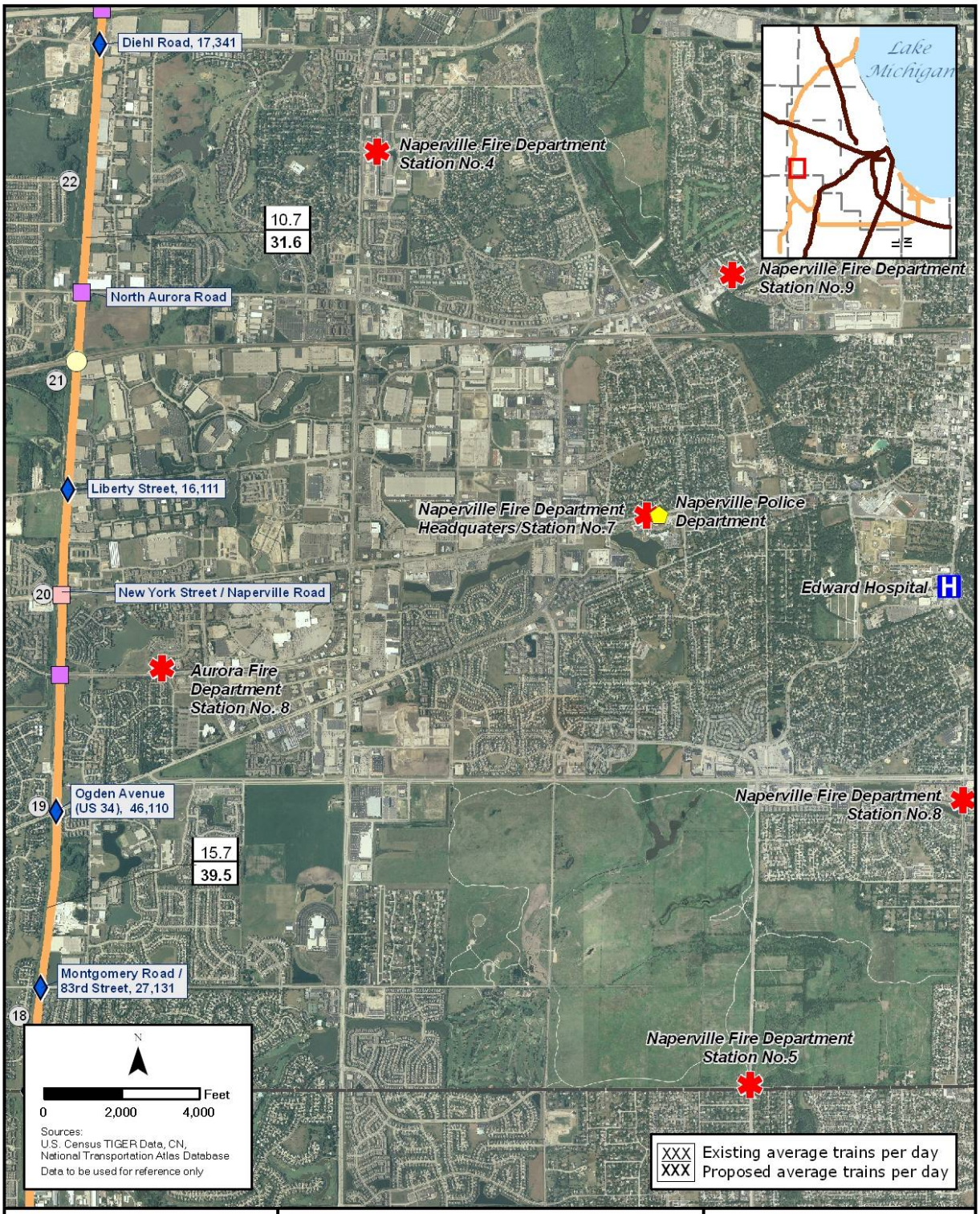


CN | EJ&E
Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Underpass
Overpass
At-Grade Rail Crossing
XXX Crossing Street Name, 2015 Average Daily Traffic
Fire Station
Hospital
Police Station
Rail Segment Boundary
55 Mile Post

Figure 2.6-2

West Chicago Fire Protection District Headquarters/Station No. 1 and Station No. 3

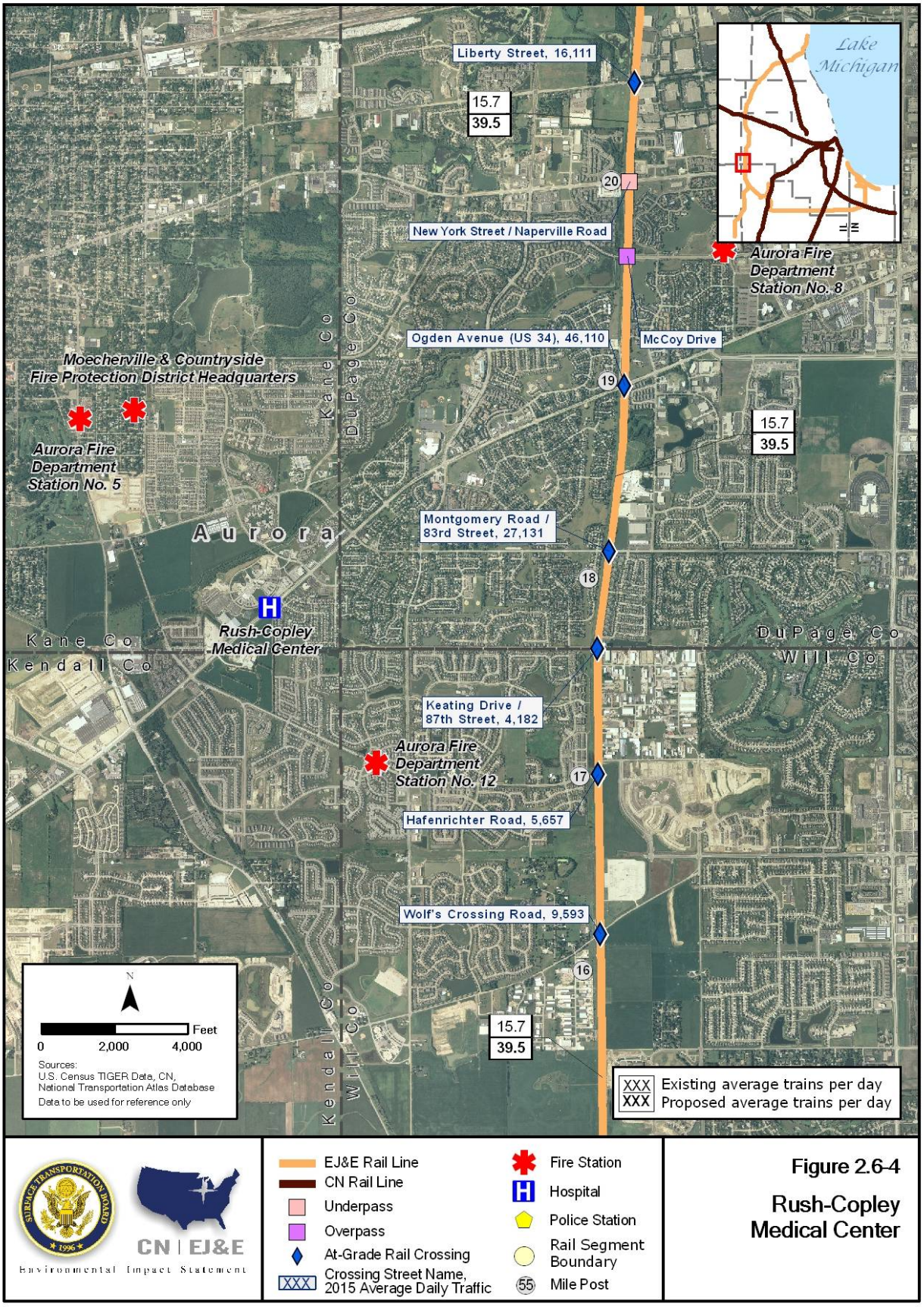


CN | EJ&E
Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Underpass
Overpass
At-Grade Rail Crossing
XXX Crossing Street Name, 2015 Average Daily Traffic
Fire Station
Hospital
Police Station
Rail Segment Boundary
55 Mile Post

Figure 2.6-3

Edward Hospital

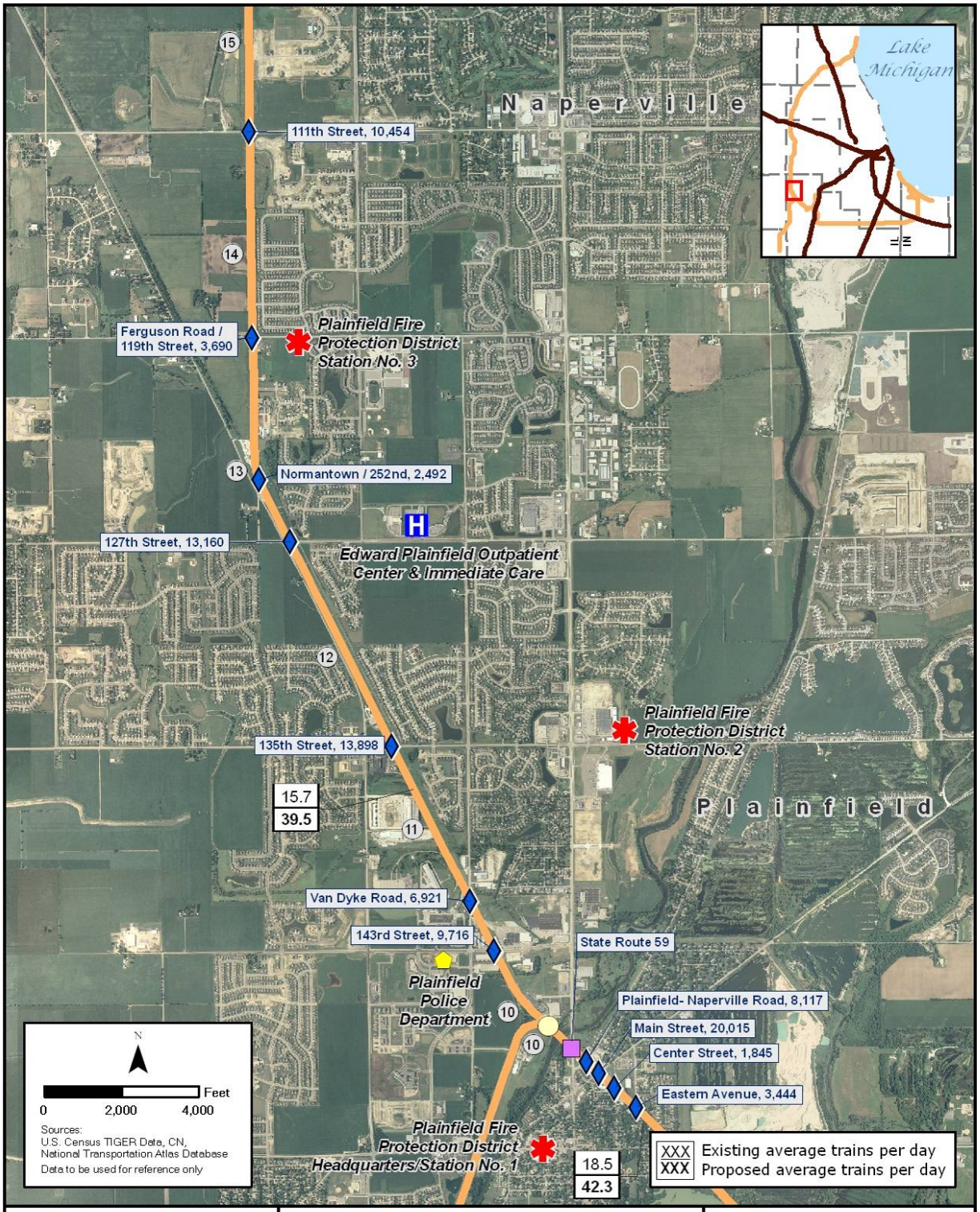


CN | EJ&E
Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Underpass
Overpass
At-Grade Rail Crossing
XXX Crossing Street Name, 2015 Average Daily Traffic
Fire Station
Hospital
Police Station
Rail Segment Boundary
55 Mile Post

Figure 2.6-4

Rush-Copley Medical Center



CN | EJ&E
Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Underpass
Overpass
At-Grade Rail Crossing
XXX Crossing Street Name, 2015 Average Daily Traffic
Fire Station
Hospital
Police Station
Rail Segment Boundary
55 Mile Post

Figure 2.6-5

Edward Plainfield Outpatient Center & Immediate Care

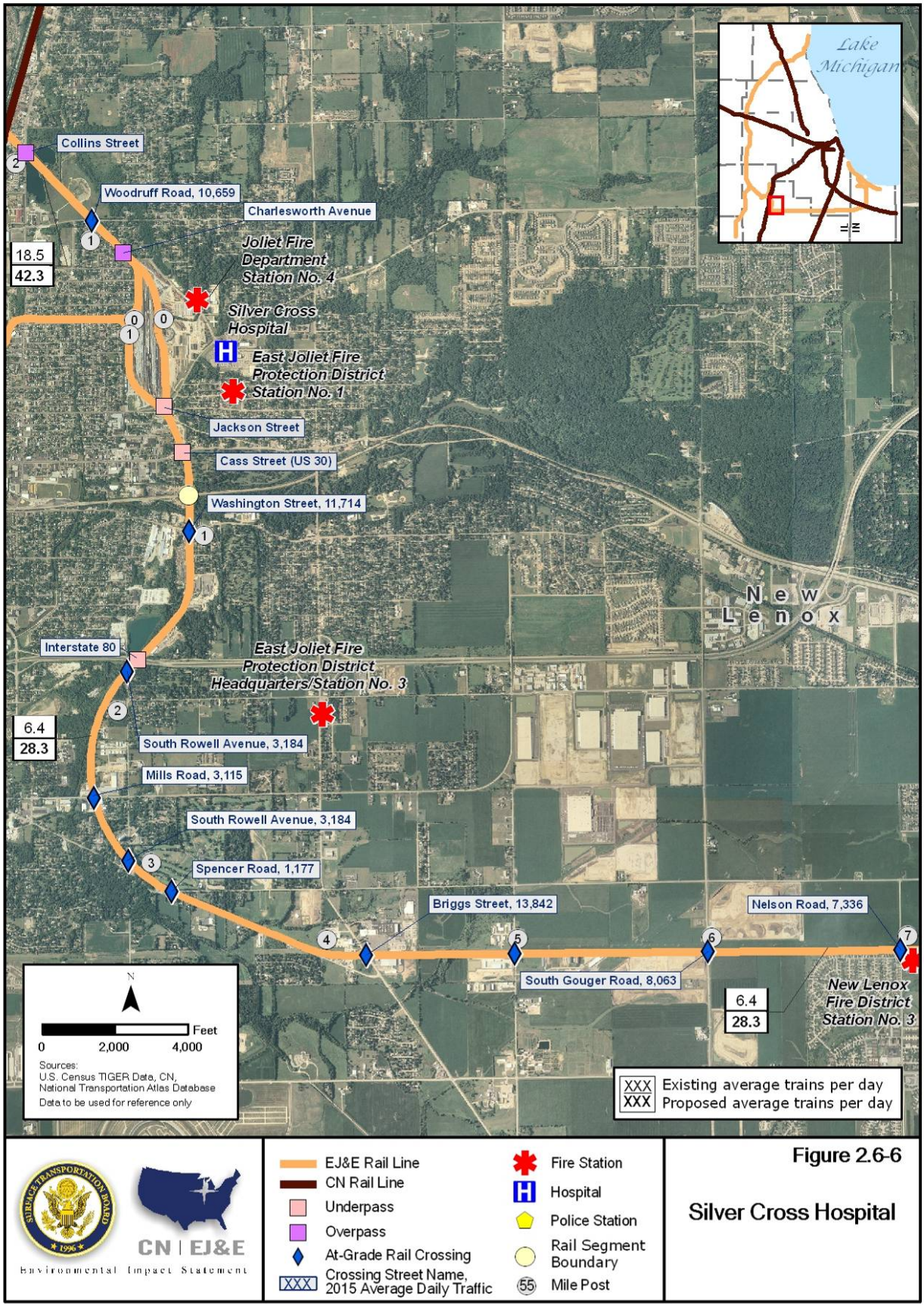
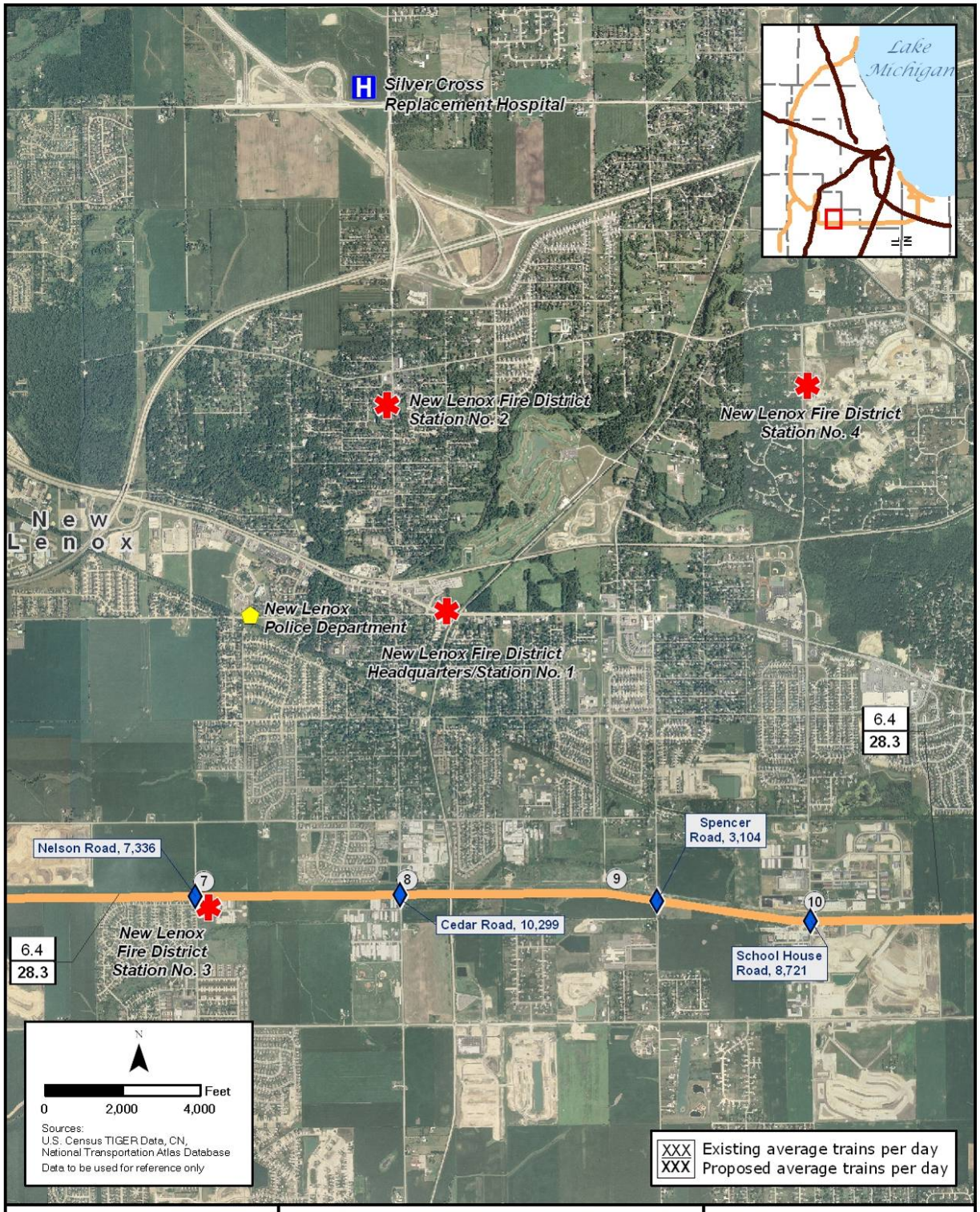


Figure 2.6-6

Silver Cross Hospital



CN | EJ&E
Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Underpass
Overpass
At-Grade Rail Crossing
XXX Crossing Street Name, 2015 Average Daily Traffic
Fire Station
Hospital
Police Station
Rail Segment Boundary
55 Mile Post

Figure 2.6-7
Silver Cross Replacement Hospital, New Lenox Fire District Headquarters/Station No.1 and Station No. 3

2.7 Hazardous Materials Transportation Safety

As discussed in Section 4.2.5 of the Draft EIS, an important part of SEA's environmental analysis involved a safety study regarding transportation of hazardous materials. As part of that analysis, SEA considered the current risk on rail segments and assessed the potential risk associated with implementation of the Proposed Action. USDOT regulations require railroads to submit a report each time a release occurs; SEA used Chicago Area Incident and Lake County Indiana Incident reports (2003-2007) to develop the analysis for risk assessment.

Commenters on the Draft EIS were concerned about the transport of hazardous materials, both domestically and in Canada. However, the Proposed Action involves a domestic regional railroad; therefore SEA's analysis has properly focused on the transport of hazardous materials within the region that would be directly affected by the Proposed Action. Information from the original analysis is presented again here in Table 2.7-1, below. Additionally, because of the comments received on this issue, SEA has reviewed CN's safety record in Canada and a summary is provided in Appendix A of this Final EIS. See Appendix A for FRA's letter approving the Applicant's Safety Integration Plan.

SEA also considered emergency response capabilities in the event of a hazardous materials release and summarized materials presented in Attachment C5 (in Appendix C of the Draft EIS). Methodologies and details of SEA's analysis are described in detail in Appendix C of the Draft EIS.

Table 2.7-1. Hazardous Material Incident Reporting System Summary[a]

AAR Commodity Group Description	Number of Incidents	Percent of Incidents	Typical Common Name
Flammable Combustible Liquid	57	62%	ethanol, methanol, toluene, xylene, styrene
Corrosive Material	14	15%	sulfuric acid, hydrochloric acid
Nonflammable Compressed Gas	7	8%	carbon dioxide, anhydrous ammonia
Miscellaneous Hazardous Material	4	4%	asphalt, crude oil
Flammable Compressed Gas	3	3%	liquefied petroleum gas (LPG), butane
Combustible Liquid	3	3%	petroleum oils
Oxidizer	2	2%	sodium chlorate, ammonium nitrate
Flammable Solid	1	1%	sulfur
Dangerous When Wet Material	1	1%	inorganic self-heating solids
Poisonous Gases	0	0%	chlorine, sulfur dioxide
Total	92	---[b]	

Notes:

[a] Data are from the Pipeline Hazardous Material Safety Administration data from the Hazardous Material Incident Reporting System (HMIRS).

[b] When added together, the percent of incidents should equal 100 percent. However the percentages equal 99 percent due to rounding.

In the Draft EIS, SEA calculated the likelihood of a release of hazardous materials resulting from a derailment, collision, or other accidents that may lead to derailments, and evaluated the proposed increase in the transport of hazardous materials on EJ&E rail segments. SEA then determined whether such increases might reach a level that warrants safety mitigation.

SEA's analysis showed that the overall predicted frequency of a release of hazardous materials (the potential that one or more railcars involved in a derailment would release such materials to the environment) anticipated under the Proposed Action varied from 71 years to 90,356 years, depending on the rail segment.

SEA concluded that hazardous material releases have historically been, and are expected to continue to be, extremely rare. SEA also concluded that there would be a potential increase in the possibility of a release on the EJ&E rail line under the Proposed Action because of an increase in train miles and carloads of hazardous materials but that the possibility of a release would remain remote.

Moreover, SEA explained there would be a reduction in the risk of a release on the CN rail lines as a result of the Proposed Action because of the redistribution of CN rail traffic to the EJ&E rail line. SEA also noted that under the No-Action Alternative, hazardous materials take more time to move through the Chicago metropolitan area on the CN rail lines than they would under the Proposed Action. The existing conditions on CN rail lines have the potential to expose more people to risk for a longer period of time than would be the case under the Proposed Action.

In response to the Draft EIS, a number of commenters requested that SEA provide additional information concerning the types of hazardous materials that would be transported on the EJ&E rail line under the Proposed Action. Section 2.7.1, below, describes the types of hazardous materials that would be transported under the No-Action and the Proposed Action Alternatives. A number of commenters also requested that SEA evaluate the potential environmental effects of a series of hypothetical situations of low probability related to the movement of hazardous materials, such as assuming that a train derails, the train includes a hazardous material, the hazardous material is released, the hazardous material is liquid, the derailment occurs in an aquifer recharge area, clean up activity is either delayed or ineffective, ground water is contaminated, and then what would be the human health effect for someone drinking water from a well. SEA believes that this type of speculation is exactly the type of "worse case" analysis that CEQ specifically determined need not be undertaken as part of a NEPA evaluation. However, in Section 2.7.2, below, SEA provides a discussion of the potential effects of a hazardous material release on some types of water resources.

2.7.1 Hazardous Materials Hauled by Trains

CN has provided detailed information to SEA about hazardous materials currently transported on CN and EJ&E rail lines, and what hazardous materials would be carried under the Proposed Action. A summary of this information, categorized by American Association of Railroads commodity groups, is presented in Table 2.7-2, Hazardous Materials Movement, below. SEA used daily carload-miles (a carload-mile is one rail car carried one mile) to measure the change in volume per commodity group transported. SEA believes that since under both the No-Action and the Proposed Action Alternatives most of the same commodity groups would be carried on the EJ&E rail line, emergency response providers would face the same types of issues in dealing with incidents that they would face under the No-Action Alternative. Emergency responders currently receive training in how to deal with hazardous materials spills and can get information from railroads as to what types of hazardous materials may be hauled through their communities. Railroads typically also have their own emergency response contractors who assist with such incidents. CN has committed to voluntary mitigation (VM 22) that would further assist communities with training needs.

Table 2.7-2. Hazardous Materials Movement (carload-miles per day)					
AAR Description	EJ&E Line (No-Action)	EJ&E Line (Proposed Action)	CN Lines (No-Action)	CN Lines (Proposed Action)	Example
Combustible Liquid	7.1	449.1	249.6	117.9	Petroleum Naphtha, Creosote
Corrosive Material	240.1	5,214.6	3,140.2	426.4	Batteries, Acids
Dangerous When Wet		21.6	12.5	0.14	Aluminum Alkyls, Magnesium Metal
Explosives		1.1	0.55	0.05	Blasting Explosives, Fireworks
Flammable Gases	91.5	4,173.0	2,159.7	33.2	Liquefied Petroleum Gas, Butane, Propylene, Acetylene
Flammable Liquid	105.6	9,134.5	4,947.9	1,235.6	Gasoline, Fuel Oil, Ethanol, Toluene, Xylene
Flammable Solid	0.9	3,305.4	879.0	71.8	Sulfur, Phosphorus (amorphous), Matches
Hazardous Waste	17.0	187.0	69.4	5.0	Contaminated soil and sediment
Miscellaneous Hazmat	69.7	5,582.8	2,363.2	769.6	Asbestos, Asphalt, Coal Tar, Petroleum Oils
Nonflammable Gases	13.0	1,354.9	745.9	22.8	Carbon Dioxide, Anhydrous Ammonia, Refrigerants
Oxidizers	28.0	1,588.1	546.5	34.3	Ammonium Nitrate Fertilizer, Hydrogen Peroxide
Poisonous Gases	52.2	796.0	436.6	57.3	Chlorine, Sulfur dioxide
Poisonous Materials	22.3	678.7	342.1	26.4	Carbon Tetrachloride, Organophosphorus Pesticides
Radioactive			0.17	0.17	Radioactive Materials, Surface Contaminated Objects
Spontaneous Combustible	0.05	9.7	6.3	0.08	White Phosphorus
Total	647.4	32,496.6	15,899.6	2,800.7	

2.7.2 Effects of Hazardous Materials Spills

SEA anticipates that a release of hazardous materials into the environment (a spill) likely would potentially lead to environmental exposure of relatively short duration, and that the effects of a potential spill would be limited by the volume of hazardous material in the railcar and by containment or remediation required by Federal, state, and local requirements. Potential soil contamination would also be limited by prompt containment and clean-up.

In response to the comments on the Draft EIS, the following sections describe a probable sequence of events and potential effects of a hypothetical spill as it relates to water resources (wetlands, ditches, streams and lakes, and groundwater and wells). The analysis is not intended to be inclusive of everything that could occur as a result of a particular incident. Different substances, locations, or circumstances could alter the chain of events that would occur in response to a spill. These examples are not meant to replace, supplement, or contradict existing or proposed hazardous material response plans. Actual affects, containment, and clean-up methods would depend on the particular substance spilled, the specific location of the spill, weather conditions at the time, accessibility of the spill site, and response time. Once again SEA notes that the actual risk of a hazardous material spill at any one specific location along the EJ&E rail line would be extremely low.

2.7.2.1 Effect on Ditches

- Effects of a spill as it relates to water resources would be mostly on railroad ROW unless there is close proximity of the spill to a municipal storm sewer, a stream, or other water resource, or if there is wet weather.
- The likelihood of long-term effects is low for a dry weather spill, and would be variable for a wet weather spill, if the material were to move beyond the ROW.
- Federal, state and local agencies would be contacted immediately as required by existing law, even if the spill is fully contained on railroad property.
- The extent of the spill would depend on the weather conditions. Wet weather conditions would result in a situation similar to a stream. See Section 2.7.2.2, below.
- A spill during dry weather could be easily contained and removed if the response is prompt.
- The spill could be contained by booms or soil berms for liquids or solids.
- Containment and clean-up would be relatively simple if access to the material is easy and should not result in environmental damage beyond the ROW when proper measures are taken. If direct access to the spill is not possible, including use of railroad right-of-way when necessary, effects beyond the ROW could be substantial.
- Spilled material could typically be 100 percent recovered.

2.7.2.2 Effect on Streams and Lakes

- The likelihood of long-term effects of a spill on affected streams and lakes would range from low to high and can not be estimated due to the many variations of possible scenarios.
- Effects likely would occur mostly beyond the railroad ROW.
- Federal, state and local agencies, and downstream communities would be contacted immediately as required by existing law.
- Some materials released could travel long distances in a short time. Floatable materials could be deposited along stream or lake banks. Heavy materials could be deposited on the stream or lakebeds. Dissolved materials could be irretrievable. Spilled material likely could not be 100 percent recovered.
- Downstream municipal drinking water intakes could have to be closed from several days to several weeks.

- The spill could be contained by cross-stream booms or coffer dams.
- Temporary emergency fill effects should be expected when creating site access for spill cleanup. Any emergency fill, alteration to hydrology or dredging would be coordinated with all appropriate Federal, state, county and local agencies and would be mitigated according to existing law.
- Containment and clean-up could be difficult and time consuming and could result in further damage to the environment, although this would be temporary.

2.7.2.3 Effect on Wetlands

- Effects of a spill located near wetlands could be both on and off railroad ROW.
- Federal, state and local agencies would be contacted immediately as required by existing law.
- The spilled material might not travel great distances, but floatable or soluble materials could, in a short time, cover open water wetlands and be transported by streams associated with fringe wetlands.
- Containment and clean-up could be difficult and time consuming and could result in further damage to the environment.
- The spill could be contained by booms or soil berms, where applicable and appropriate.
- Adverse effects resulting from temporary or permanent emergency fill would be expected when creating site access for spill cleanup. Any emergency wetland effects, including fill, alteration to hydrology or dredge would be coordinated with all appropriate Federal, state, county and local agencies and mitigated according to the existing law.
- Spilled material might not be 100 percent recovered.
- There is a moderate risk of long-term effects and would most likely result in a change in wetland vegetation and could create the potential increases in invasive species depending on the material that was spilled. Potential long-term effects could include:
    - A change in the water or soil pH
    - A change in the soil nutrient composition or nutrient uptake
    - A smothering of vegetation and soil compaction
    - A change in community composition, which could favor pioneer or invasive species

2.7.2.4 Effect on Groundwater and Wells

In the study area, groundwater is used for public water supplies, private wells, and industrial uses. There are 54 public water supply wells near the EJ&E rail line. Research indicates that a majority (62 percent) of these use the shallow (less than 500 feet) bedrock aquifers.

SEA evaluated the susceptibility of a hazardous material spill on local groundwater by considering well proximity to the ROW, direction of groundwater flow, and potential for contamination as determined by the properties (thickness and permeability) of the geologic materials. In many locations along the EJ&E rail line the material overlying the groundwater layer is of low permeability, or is reasonably thick, such that containment and remediation measures would limit the potential of a spill to effect the groundwater. However, SEA did identify one location where a public water supply well in Plainfield, Illinois could be affected by a hazardous material spill. SEA also identified several rail segments with potential for a spill to affect private wells.

Additional analysis following publication of the Draft EIS identified areas where the Silurian dolomite aquifer has a higher potential for contamination from the surface. In these areas, the geologic materials overlying the bedrock are thin, or have been eroded and replaced by more permeable alluvial or glaciofluvial materials. These conditions would reduce the attenuation of contaminants in the overburden and reduce the time for contaminants to migrate through the overburden and enter the bedrock, increasing the susceptibility of the bedrock aquifer.

In addition to increased aquifer susceptibility, water supplies in these areas are at greater risk because of flow conditions within the shallow bedrock aquifer. Groundwater flow in the Silurian Dolomite occurs within fractures in the rock. Over time, the flow of water dissolves the carbonate rock, enlarging the fractures into cavities. The majority of flow occurs in these cavities, and the flow behaves hydraulically as pipe flow. As a result, these conduits are capable of rapidly moving large amounts of water or contamination over long distances. As seen in Figure 3.12-3 of the Draft EIS, a sinkhole has been documented southeast of the Joliet area. This suggests that significant dissolving action may have caused enlargement of fractures in the dolomite aquifer within the region.

Not all spills result in groundwater contamination. Because groundwater velocities are very low, there typically is time to react to contamination before public or private water supplies are affected. Because hazardous material spills are rare and containment and cleanup are generally prompt, the overall potential of the Proposed Action to adversely affect groundwater supplies is very low. In the unlikely event that groundwater resources were affected by a spill, CN would be required by existing law to provide mitigation. This could include such activities as groundwater remediation and/or providing an alternate supply of water. The exact nature of the final mitigation resulting from a specific incident would be negotiated with the Illinois Environmental Protection Agency or the Indiana Department of Environmental Management, and other governmental bodies.

Figure 2.7-1, below, shows the areas where the shallow bedrock aquifer is more susceptible to contamination. For the EJ&E rail line portion of the Proposed Action, the susceptible area is in the vicinity of Joliet along and near the Des Plaines River. The area of susceptibility extends northeastward from Joliet following the existing CN ROW along the Des Plaines River in Will, DuPage and Cook Counties. If a contaminant were released in these areas, public and private wells drilled into bedrock in the vicinity of the release could be affected. Because of the large number of potentially affected wells in the area, it would be speculative for SEA to attempt to provide any sort of detailed analysis on what the potential effects of a spill would be. Due to the variable nature of the type of hazardous material released, the specific location of the release, the amount of the release, the effectiveness of the response, and specific hydrogeological factors such as fracture patterns, well construction, pumping rates and general flow directions, any groundwater contamination, and transport modeling would be speculative. It also should be noted, that since the EJ&E rail line currently traverses these susceptible areas, the threat to these wells already exists. The Proposed Action changes the likelihood that a given well could be affected (because more hazardous material would travel over the EJ&E rail line), but does not change the potentially affected areas or populations.

The Proposed Action does not create any new threats to wells or water supplies. The environmental consequences of the Proposed Action to groundwater take the form of increased possibilities for spills, which increases existing risks.

If a spill were to occur, CN would be required by existing law to mitigate the effects by remediating the groundwater resource and/or providing an alternate supply of water to the property owner. Mitigation measures would be negotiated with governmental agencies. A typical scenario is provided below.

EJ&E Rail Line

CN Rail Line

Other Rail Line

Areas of Higher Susceptibility for Contamination of Shallow Bedrock

CN | EJ&E

Environmental Impact Statement

Figure 2.7-1

Areas of Higher Susceptibility for Contamination of Shallow Bedrock Aquifers

- Effects likely would mostly be beyond the railroad ROW.
- Federal, state and local agencies would be contacted immediately as required by law.
- The first priority would be emergency mitigation of the spill, including:
  - Containment of migration as run-off or via surface water
  - Excavation of the most highly contaminated soils
  - Sampling of potentially affected public and private water supplies and mitigation if any effects were documented
- If residual contamination remained following the emergency mitigation, a remedial investigation would be conducted to document the extent and magnitude of the soil and groundwater contamination, as well as the rate and path of its migration.
  - Soils would be sampled to document levels of residual contamination that might pose health risks or that may become a future source of groundwater contamination
  - Groundwater would be investigated by constructing monitoring wells to determine rates and directions of groundwater flow, as well as to provide chemical samples of the contaminant plume
  - Additional sampling of potentially affected public and private wells would be conducted, if warranted
- The risk assessment process would establish the cleanup standards. Once the extent of the groundwater contamination had been identified, the risks to human health and the environment would be assessed. Receptors of the contamination would be identified and potential exposures of the receptors would be evaluated. Potential routes of exposure would include ingestion, dermal contact and vapor inhalation by residents in their homes and workplaces.
- Corrective actions, if necessary, would be determined by a feasibility study of the best available remedy to fully address the risk.
- The remedial action plan decided upon by the appropriate authorities would be implemented and progress would be monitored.
- The entire process would be overseen by Federal and state regulatory agencies, and approval would be required at each step.

2.7.3 Emergency Response

Several comments on the Draft EIS questioned the ability of local communities and CN to respond to a release of a hazardous material. Although unlikely, these events require railroads to work very closely with the chemical industry to educate emergency responders. The American Chemistry Council's (ACC) Transportation Community Awareness and Emergency Response (TRANSCAER) program, and programs developed by railroads, are used to train over 20,000 emergency responders a year in response methods. CN is an active participant in the TRANSCAER program. CN's Rail Transportation Centers play an important role in the emergency response process, and local operations are handled out of CN's Homewood Rail Transportation Center. The Rail Transportation Centers coordinate all response efforts within CN and with outside agencies and responders.

The Applicants have proposed 13 different voluntary mitigation measures discussed in Chapter 4 of this Final EIS (VM 14 through VM 26), that include providing communities with information and training to assist local response agencies to prepare for emergencies. Under CN's voluntary mitigation, if a rail accident were to occur, railroads would provide emergency responders with a full train consist (or list of car types) to better manage the response. CN would also provide three phases

of training for the response community, through its Responder Education Assistance and Certification Training (REACT) program, designed to enhance preparedness and foster partnerships with emergency responders.

As noted in the Draft EIS, CN's system-wide plan for handling emergencies, or Emergency Response Plan (ERP), is reviewed annually, and local response plans are prepared for individual yards and facilities. The ERPs include extensive training requirements for rail employees.

Sections 3.2.3.3 and 3.2.3.4 of the Draft EIS discussed the capabilities for response to a release incident in and around the Chicago metropolitan area. In addition to the emergency management and response capabilities of both CN and EJ&E, many communities along the EJ&E have Local Emergency Planning Commission (LEPCs) that are trained and prepared to respond to hazardous materials incidents. A table providing the response capabilities of local communities is provided in Appendix C4 of the Draft EIS.

2.7.4 Conclusion

Although train accidents resulting in the release of hazardous materials are remote, increases in freight rail traffic along the EJ&E rail line would have a corresponding increase in the risk of hazardous material spills. However, the freight currently being transported on the EJ&E includes hazardous materials, and the same classes of hazardous materials would be transported if the Proposed Action is approved. Therefore, SEA has reached the conclusion that the Proposed Action does not create any new threats. Adverse effects from the Proposed Action take the form of increased probabilities for spills and releases, although the probabilities are still low. As explained in the Draft EIS, if a spill were to occur, CN is required by Federal and state regulations to report and respond immediately. SEA has also determined that CN has appropriately trained and equipped responders to provide effective and timely response in the event of a release.

2.8 Property Values

A number of commenters questioned SEA's conclusions concerning effects to property values in the Draft EIS. In response, SEA conducted additional research on potential property value effects, which included:

- Conducting an additional literature review to find additional studies of potential effects of freight rail traffic on property values or other closely related studies
- Preparing a comparative assessment of current residential property values along the EJ&E rail line to determine if there is a difference between the value of properties near the EJ&E rail line and those further away from the rail line
- Estimating the number of residences potentially affected by changes in train traffic as a result of the Proposed Action, as well as the total number of residences in the adjacent communities
- Estimating the extent of the effect to residential property values and tax revenues for communities that would experience transaction-related additional freight train traffic

SEA summarizes the results of this research, below:

2.8.1 New Property Value Studies

The supplemental literature review found four additional studies on the potential for train noise to adversely affect residential property values. These studies provide background for the additional property value analysis in this section.

Study 1. Schwieterman, Joseph P. Ph.D and Brett Baden. 2001. *Alternatives to the Whistle: The Role of Education and Enforcement in Promoting Highway-Rail Grade Crossing Safety in Metropolitan Chicago, Chaddick Institute Working Paper 09-00*. Chaddick Institute for Metropolitan Development, DePaul University. March 2001.

The Schwieterman and Baden study, suggested by a stakeholder group, evaluated the costs of implementing (or enforcing) whistle bans in Chicago. The study noted that sounding whistles at rail crossings increases safety, but there are social costs of increased noise. Conversely, decreasing noise levels by enforcing Quiet zones reduces safety because drivers misjudge how far away the train is from the crossing and drive around the crossing barriers. Schwieterman and Baden concluded that improving crossing controls (constructing barrier arms across the entire road on both sides of the track, and installing video monitors to catch motorists who try to go past the gates) would increase safety while maintaining low noise levels. SEA notes that Federal Railroad Adminstration (FRA) has issued final rules for the establishment of Quiet zones. In addition, the Applicant's voluntary mitigation (VM 3 through VM 5) would address these issues.

Although the crossing controls suggested by Schwieterman and Baden are expensive (between $200,000 and $300,000 per intersection), the authors assert that these improvements are cheaper than the social cost of reduced property values from whistle noise. In Table 1 of their study, Noise Pollution Property Damage Studies, Schwieterman and Baden summarize the findings from six studies that provide a range of property value effects. Of these studies, two are from highway traffic studies, three are from airport noise studies, and one is from a neighborhood noise levels study. Prior to Table 1, Schwieterman and Baden describe a study by David E. Clark that specifically addressed the effects of locomotive horn nuisances in three communities in Ohio and Massachusetts (see the summary of study by Clark below), but conclude that "due to the Clark study's ambiguous results, it is omitted from the table."

Table 2.8-1 below shows the range of expected property value effects from noise-related property damages shown in Table 1 of the Schwieterman and Baden study and the calculated percentage of property value loss. The range of adverse effects ranged from 2.5 percent to 21.65 percent. However, it appears that the high and low estimates may be atypical and that the expected effects generally would range from 6.66 percent to 10.82 percent.

Table 2.8-1. Summary of Impacts from Schwieterman and Baden

Author	Study Type	Estimated Impact	Total Value of Property[a]	Percent Impact
Vaughan/Huckins	Highway Traffic	$4,004,944,000	$37,000,000,000	-10.82%
Nelson	Highway Traffic	$2,464,581,000	$37,000,000,000	-6.66%
O'Bryne	Airport Noise	$3,758,488,000	$37,000,000,000	-10.16%
Nelson	Airport Noise	$3,080,727,000	$37,000,000,000	-8.33%
Levesque	Airport Noise	$8,009,891,000	$37,000,000,000	-21.65%
Li/Brown	Neighborhood Noise Levels	$924,218,000	$37,000,000,000	-2.50%

Notes:
[a] The Total Value of Property estimate is from the Schwieterman and Baden study.

The Schwieterman and Baden study only addressed whistle noise and did not include potential effects of traffic delays, noise, vibration, or air quality. In their voluntary mitigation (see Chapter 4), the Applicants have committed to maintain existing quiet zones and cooperate with communities wishing to establish new quiet zones (Condition No. 10); this would reduce a major source of rail-related noise along the populated sections of the EJ&E rail line and would avoid any property value effects associated with increased whistle noise.

Given the differences in study type, methodology, location, and year, the potential range of effects (6.66 percent to 10.82 percent) suggested by Schwieterman and Baden, while somewhat higher than the information provided in the Draft EIS, is generally consistent with the Draft EIS findings. It also should be noted that the Schwieterman and Baden study did not include the Clark (2006) study available to them because they believed the results of that study were ambiguous. In addition, a study by Fields and Walker (1981) may question the validity of the Schwieterman and Baden (2001) study; Fields and Walker found that railway noise is less annoying than other noises at any given high noise level because railway noise annoyance increases less rapidly with increasing noise level.

Study 2. Strand, J. and M. Vagnes. 2001. *The Relationship between Property Values and Railroad Proximity: A Study Based on Hedonic Prices and Real Estate Brokers' Appraisals.* Transportation, 28. 2001.

Strand and Vagnes examined the relationship between the price of residential property and proximity to railroads in Oslo, Norway, by conducting hedonic price analysis[5] and real estate agents' evaluation of such a relationship. They found that properties within 100 meters (328 feet) of a rail line are detrimentally affected. They also found that doubling of the distance within the 100 meter buffer area increases housing values by 10 percent over properties closer to the rail lines.

Study 3. Clark, David E. 2006. *The Effects of Ignoring Train Whistle Bans on Residential Property Values.* Marquette University.

Clark addressed effects of whistle noise on property values. This issue has not received many comments because of the existing Quiet zones along sections of rail line. Clark's thesis is that "… proximity to both Conrail and other rail lines consistently reveal that properties within 1,000 feet of a rail line experience significantly lower home sale prices. The reductions for properties along Conrail lines are between 4.7 percent and 5.9 percent, whereas the reductions were somewhat higher along other lines (i.e., about 5.8 percent in Trumbull County, Ohio; 13.3 percent in Butler County, Ohio; and 7.7 percent in Middlesex County, Massachusetts)."

Clark went on to state that, "The findings consistently show that proximity to rail lines has a negative and statistically important influence on residential property values. In addition, there is also evidence that proximity to rail crossings can reduce the real sale price of homes, although there is also evidence to the contrary. All of these effects existed prior to the point at which Conrail began ignoring the train whistle bans in these three areas. However, the overall weight of evidence reveals little information that the decision by Conrail to begin ignoring whistle bans had any permanent and appreciable influence on the housing values in these communities."

In his study of three communities, Clark found that proximity to rail lines reduced property values by 4.7 percent to 13.3 percent. This suggested that property values are already affected by proximity to rail lines. Because the EJ&E rail line is an existing feature of the area, however, one can assume that a portion of these adverse affects has already been incorporated into current property values.

Study 4. Berry, Christopher and Ethan Bueno de Mesquita. 2008. *Stalemate over Rail Plan Reflects Failure of Political Leadership.* Harris School of Public Policy Studies. The University of Chicago. Unpublished study.

The authors of the Berry and Bueno de Mesquita paper submitted it as a comment to the Draft EIS. Responses to the paper's comments are found in Chapter 3 of the Final EIS. Berry and Bueno de Mesquita's thesis is that the benefits to downtown Chicago neighborhoods and the region as a whole from reduced freight train traffic as a result of the Proposed Action would clearly outweigh any harm

[5] Hedonic pricing is defined as the use of statistical techniques such as regression analysis to determine, from the prices of goods with different measurable characteristics, the prices that are associated with those characteristics. The latter can then be used to construct what the comparable price of a good would be from its characteristics.

faced by the suburbs along the EJ&E rail line. Berry and Bueno de Mesquita note that there are more residents in the downtown Chicago neighborhoods than in the suburbs and that these people are less wealthy and more likely to be minorities. Berry and Bueno de Mesquita claim that suburban residents have the "political clout associated with money and organization." They conclude that political leaders should work to find ways to offset suburban costs rather than block the Proposed Action, and that the Board should require the Applicants to pay more than a railroad's customary share for grade-separated crossings in areas where traffic would increase significantly as a result of the Proposed Action. The Berry and Bueno de Mesquita study does not specify or quantify the regional benefits; they simply state that the regional benefits would be greater than the costs for nearby residents.

The Berry and Bueno de Mesquita paper supports the conclusion that redirecting train traffic from downtown Chicago neighborhoods to less populated suburban/rural areas would produce a net social benefit. But, they did not quantify these effects and did not estimate the property effects from either adding trains to an existing freight rail line or removing trains from another existing rail line.

2.8.2 Comparative Assessment of Current Residential Property Values

In preparing this Final EIS, SEA used a property appraiser to conduct an analysis of properties currently for sale in Barrington and Matteson, Illinois, within 300 feet of the EJ&E rail line (adjacent to the rail line) and compared those properties outside of the 300-foot study area (away from the rail line). Barrington and Matteson were selected for study because of a high number of concerns raised by citizens of those communities related to effects to property values and data availability. The quantitative data for the analysis is presented in Table 2.8-2 through Table 2.8-5. The analysis found:

- In Barrington, the price of land adjacent to the tracks was roughly half the value of land away from the tracks; however, the asking price for houses adjacent to the tracks in Barrington was greater than for houses further away.
- In Matteson, the price of land adjacent to the tracks is roughly 20 percent less than land away from the tracks. The asking price for homes adjacent to the tracks in Matteson is less than for homes further away.
- In more expensive areas like Barrington, people buy relatively cheaper land closer to the tracks and build larger, more expensive homes on larger lots. In Matteson, the housing stock is older, and the value is less for properties next to the tracks.
- For higher end houses, amenities may offset the adverse effect of trains, but this is not true for lower value houses. This finding is consistent with the findings of the Simons and El Jaouhari study (2004) cited in the Draft EIS.

Data for Table 2.8-2 through Table 2.8-5 were developed using a combination of the Zillow Real Estate listing service to obtain prices for listed properties and county assessor records to determine size of lots. These are homes listed for sale with the multiple listing service, and data collected during the week of October 6, 2008 were used to calculate ratios based on total assessment for bare lands values and improvement values. SEA looked for homes within 300 feet of the EJ&E rail line and homes outside the 300-foot boundary. Addresses for the actual properties compared are included in the tables below.

Table 2.8-2. 2008 Property Values in Barrington, Illinois - Adjacent to the EJ&E Rail Line (within 300 feet)								
House	House Square Footage	Land Square Footage	Asking Price	Estimated Land Value	Estimated House Value	Land Value per Square Foot	Cost per Acre	Address
1	3,801	22,414	$999,000	$281,372	$717,628	$12.55	$546,826	55 Lakeview Lane, Barrington
2	8,996	57,369	$3,895,000	$550,930	$3,344,070	$9.60	$418,318	7 Elle Court, Barrington
3	7,602	142,441	$3,399,500	$308,903	$3,090,597	$2.17	$94,466	65 Round Barn Rd., Barrington
4	4,127	217,800	$865,000	$240,417	$624,583	$1.10	$48,083	65 Windrush, Barrington Hills
5	4,939	280,091	$1,995,000	$51,543	$1,943,457	$0.18	$8,016	132 Old Dundee, Barrington Hills
6	3,242	215,535	$1,195,000	$382,140	$812,860	$1.77	$77,231	120 Brinker Rd., Barrington Hills
7	6,501	261,360	$4,197,000	$730,615	$3,466,385	$2.80	$121,769	210 Otis Rd., Barrington Hills
8	3,510	206,039	$799,000	$229,992	$569,008	$1.12	$48,624	69 Otis Rd., Barrington
9	3,701	182,081	$1,975,000	$456,531	$1,518,469	$2.51	$109,218	61 Otis Rd., Barrington
10	2,806	17,610	$599,900	$127,898	$472,002	$7.26	$316,368	375 Elm Rd., Barrington
11	2,629	222,592	$875,000	$296,916	$578,084	$1.33	$58,105	48 Otis Rd., Barrington
12	3,495	233,046	$800,000	$245,148	$554,852	$1.05	$45,822	40 Otis Rd., Barrington
13	3,800	34,292	$559,000	$214,081	$344,919	$6.24	$271,940	665 Bent Ridge Lane, Barrington
Average	4,550	160,975	$1,704,108	$316,653	$1,387,455	$3.82	$166,522	

Table 2.8-3. 2008 Property Values in Barrington, Illinois - Away from the EJ&E Rail Line (beyond 300 feet)								
House	House Square Footage	Land Square Footage	Asking Price	Estimated Land Value	Estimated House Value	Land Value per Square Foot	Cost per Acre	Address
1	4,137	12,527	$775,000	$52,599	$722,401	$4.20	$182,902	1469 Columbia Lane, Barrington
2	4,452	50,878	$1,450,000	$306,377	$1,143,623	$$6.02	$262,309	6 Hubbell Court, Barrington
3	1,190	13,983	$309,000	$98,731	$210,269	$7.06	$307,568	716 S Cook, Barrington
4	4,622	11,478	$760,000	$243,034	$516,966	$21.17	$922,335	208 Astoria Court Barrington
5	3,898	272,293	$1,339,000	$433,882	$905,118	$ 1.59	$69,410	337 Old Sutton Rd, Barrington Hills
6	1,990	10,005	$389,900	$76,242	$313,658	$ 7.62	$331,944	1246 Berkshire Lane Barrington
7	2,580	44,296	$649,000	$162,198	$486,802	$ 3.66	$159,503	21950 Chapel Hill Dr. Deer Park
8	3,128	20,038	$769,000	$218,246	$550,754	$10.89	$474,438	619 Oak Rd, Barrington
9	864	8,683	$285,000	$110,188	$174,812	$12.69	$552,780	447 N Cook St., Barrington
10	2,700	7,890	$599,000	$96,396	$502,604	$12.22	$532,194	422 N Cook St., Barrington
11	10,104	17,360	$598,990	$61,530	$537,460	$ 3.54	$154,392	210 Lageschulte St., Barrington
12	2,610	10,650	$569,000	$76,017	$492,983	$ 7.14	$310,920	450 Westwood Dr. Barrington
13	2,738	20,625	$1,000,000	$228,115	$771,885	$11.06	$481,779	444 Otis Rd. Barrington
14	832	6,250	$289,900	$46,741	$243,159	$ 7.48	$325,766	732 Prairie Ave. Barrington
Average	3,275	36,211	$698,771	$157,878	$540,892	$ 8.31	$362,017	
Difference[a]	1,275	124,763	$1,005,337	$158,774	$846,562	-$ 4.49	$195,495	

Note:

[a] The difference equals the average values adjacent to the EJ&E rail line (Table 2.8-2) minus the average values away from the EJ&E rail line.

Table 2.8-4. 2008 Property Values in Matteson, Illinois – Adjacent to the EJ&E Rail Line (within 300 feet)								
House	House Square Footage	Land Square Footage	Asking Price	Estimated Land Value	Estimated House Value	Land Value per Square Foot	Cost per Acre	Address
1	2,650	18,889	$255,000	$65,421	$189,579	$3.46	$150,868	22011 Brook Ave., Richton Park
2	3,000	10,533	$333,423	$58,482	$274,941	$5.55	$241,857	5064 Capri Lane, Richton Park
3	1,219	11,269	$129,900	$41,654	$88,246	$3.70	$161,012	4508 Balmoral Dr., Richton Park
4	4,127	6,100	$69,900	$16,358	$53,542	$2.68	$116,812	4456 Balmoral Dr., Richton Park
5	1,092	7,500	$189,000	$39,019	$149,981	$5.20	$226,622	21707 Locust St., Matteson
6	1,100	9,243	$94,900	$45,232	$49,668	$4.89	$213,167	150 Algonquin St., Park Forest
7	1,356	6,600	$120,000	$41,250	$78,750	$46.25	$272,250	11 Apache St., Park Forest
8	1,197	7,140	$56,900	$19,555	$37,345	$2.74	$119,302	278 Allegheny St., Park Forest
Average	1,968	9,659	$156,128	$40,871	$115,257	$4.31	$187,736	

Table 2.8-5. 2008 Property Values in Matteson, Illinois – Away from the EJ&E Rail Line (beyond 300 feet)								
House	House Square Footage	Land Square Footage	Asking Price	Estimated Land Value	Estimated House Value	Land Value per Square Foot	Cost per Acre	Address
1	1,744	8,880	$169,000	$35,523	$133,477	$4.00	$174,254	557 Homan Ave., Park Forest
2	1,209	7,500	$156,900	$36,305	$120,595	$4.84	$210,859	302 Illinois St., Park Forest
3	1,391	9,297	$127,000	$32,887	$94,113	$3.54	$154,088	506 Davis St., Park Forest
4	1,801	8,400	$99,000	$23,035	$75,965	$2.74	$119,453	21616 Richmond Rd., Matteson
5	1,224	8,417	$174,500	$46,437	$128,063	$5.52	$240,323	21201 Tower Ave., Matteson
6	1,284	36,895	$235,000	$34,542	$200,458	$0.94	$40,782	4341 Kildare Ct., Matteson
7	1,354	1,534	$215,000	$26,157	$188,843	$17.05	$742,763	5232 Southwick Ct., Mattes.
8	2,752	9,153	$184,900	$33,798	$151,102	$3.69	$160,848	6246 Garden View Lane, Matteson

Table 2.8-5. 2008 Property Values in Matteson, Illinois - Away from the EJ&E Rail Line (beyond 300 feet)								
House	House Square Footage	Land Square Footage	Asking Price	Estimated Land Value	Estimated House Value	Land Value per Square Foot	Cost per Acre	Address
9	1,294	8,400	$169,900	$35,162	$134,738	$4.19	$182,340	6307 Streamwood Lane, Matteson
Average	1,561	10,942	$170,133	$33,761	$136,373	$5.17	$225,079	
Difference [a]	406	-1,283	-$14,005	$7,111	-$21,116	-$0.86	-$37,343	

Note:
[a] The difference equals the average values adjacent to the EJ&E rail line (Table 2.8-4) minus the average values away from the EJ&E rail line (Table 2.8-5).

2.8.3 Estimate of Property Value and Residential Property Tax Effects

Commenters expressed concern about the effects of the Proposed Action on property values. Commenters also stated that loss of property values and reductions in the tax base would affect local jurisdictions' ability to fund schools and other programs. In response, SEA prepared an estimate of the fiscal effects of the Proposed Action based on decreases in value of homes near the EJ&E rail line. SEA made reasonable assumptions or estimates when data were unavailable or likely to understate the effects of the Proposed Action.

2.8.3.1 Assumptions

- Based on the study by Simons and El Jaouhari (2004) cited in the Draft EIS, effects on property values predominantly occur within 250 feet of railroad tracks. For the analysis in this Final EIS, SEA extended the potential effect study boundary from 250 to 300 feet to provide a more conservative (that is, higher) estimate of the number of housing units affected. SEA also applied the 5.35 percent decline in property value estimated in the Simons and El Jaouhari study.
- SEA assumed that only the value of single-family residential units would be affected.
- SEA used 2007 as the analysis year. SEA used 2007 aerial photographs to count housing units, and other data are from 2007 estimates. SEA used 2007 property tax rates for each jurisdiction, unless data were not available. In those situations, SEA used a 10 percent property tax rate, which is higher than the property tax rate for most jurisdictions.
- Cook County appraises residential property at approximately 10 to 16 percent of actual value and other counties appraise at 33 1/3 percent of actual value. To provide a conservative estimate of appraised value, SEA used 20 percent for jurisdictions in Cook County and 35 percent for jurisdictions in other counties. In cases where a community is located in Cook County and another county, the 35 percent figure was applied so that the calculations were conservative (that is, higher).
- SEA found that the only estimates of 2007 single-unit housing values available were median values for each jurisdiction. SEA recognizes that median values likely understate the value of housing units near the EJ&E rail line. Therefore, SEA inflated other factors noted above to compensate (that is, SEA used more housing units and higher appraised values).

2.8.3.2 Data Sources

- *2000 Homes* – U.S. Census Bureau, Census 2000, Summary File 1, Table H1
- *2000 – 2007 Building Permits* – Manufacturing, Mining, and Construction Statistics section of U.S. Census Bureau, "Permits By County or Place," <http://www.census.gov/const/www/permitsindex.html>
- *2007 Estimated Total Housing Units* – Calculated value based on the above two items.
- *Municipal Tax Rates (IL)* – Illinois Department of Commerce and Economic Opportunity, Community Profiles, <http://www.commerce.state.il.us/dceo/Bureaus/Community_Development/CommProfiles/Default.htm>
- *Municipal Tax Rates (IN)* – State of Indiana Department of Local Government Finance - *Lake County Final Budget Order 2007*, page 4 of PDF, <http://www.in.gov/dlgf/files/BudgetOrder_2007_LakeCounty.pdf>
- SEA identified houses within 300 feet of the EJ&E rail line using Geographic Information System technology and 2007 aerial photography.

Table 2.8-6, below, presents the total number of single-family housing units, the number of potentially affected units, and associated property values. Overall, about 0.5 percent of the housing units in communities along the EJ&E rail line could potentially be affected by the Proposed Action, with four of the 29 cities along the EJ&E rail line having more than 100 residents affected. Column (f) in Table 2.8-6, below, shows the estimated loss in property value for housing units within 300 feet of the EJ&E rail line using the 5.35 percent loss factor from the Simons and El Jaouhari (2004) study. For the communities along the EJ&E rail line, the potential loss in residential property value under the Proposed Action would be about 0.02 percent, with some communities such as Barrington, Illinois, experiencing losses as high as 0.16 percent and other communities such as Lynwood and Mokena, Illinois, and Schererville, Indiana, experiencing almost no loss at all.

Table 2.8-6. Estimated Effects of the Proposed Action on Residential Property Values

Location	(a) 2007 Estimated Total Single Housing Units	(b) Homes within 300 Feet of Tracks	(c) Percent of Affected Single Housing Units (c)=100 x (b)/(a)	(d) 2007 Median Value of Single Housing Units	(e) Estimated Total Single Unit Residential Property Value (e)=(a) x (d)	(f) Estimated Residential Property Value Effect (Loss) (f)=(b) x (d) x 0.0535
Illinois						
Aurora	55,752	170	0.30	$213,400	$11,897,476,800	$1,940,873
Barrington	4,013	117	2.92	$589,500	$2,365,663,500	$3,689,975
Barrington Hills	1,683	18	1.07	$1,182,100	$1,989,474,300	$1,138,362
Bartlett	14,418	91	0.63	$365,800	$5,274,104,400	$1,780,897
Chicago Heights	11,534	58	0.50	$169,400	$1,953,859,600	$525,648
Crest Hill	7,126	30	0.42	$176,100	$1,254,888,600	$282,641

Table 2.8-6. Estimated Effects of the Proposed Action on Residential Property Values						
	(a)	(b)	(c)	(d)	(e)	(f)
Location	2007 Estimated Total Single Housing Units	Homes within 300 Feet of Tracks	Percent of Affected Single Housing Units (c)=100 x (b)/(a)	2007 Median Value of Single Housing Units	Estimated Total Single Unit Residential Property Value (e)=(a) x (d)	Estimated Residential Property Value Effect (Loss) (f)=(b) x (d) x 0.0535
Crystal Lawns	1,044	20	1.92	$191,300	$199,717,200	$204,691
Deer Park	1,088	15	1.38	$704,800	$766,822,400	$565,602
Elgin	37,087	20	0.05	$222,600	$8,255,566,200	$238,182
Frankfort	5,945	94	1.58	$388,700	$2,310,821,500	$1,954,772
Hawthorn Woods	2,441	29	1.19	$619,700	$1,512,687,700	$961,465
Hoffman Estates	18,772	27	0.14	$324,700	$6,095,268,400	$469,029
Joliet	51,046	91	0.18	$197,400	$10,076,480,400	$961,042
Lake Zurich	6,429	112	1.74	$352,900	$2,268,794,100	$2,114,577
Long Grove	2,471	8	0.32	$870,600	$2,151,252,600	$372,617
Lynwood	3,109	1	0.03	$251,600	$782,224,400	$13,461
Matteson	6,721	124	1.84	$241,400	$1,622,449,400	$1,601,448
Mokena	6,573	2	0.03	$343,000	$2,254,539,000	$36,701
New Lenox	8,251	30	0.36	$284,500	$2,347,409,500	$456,623
Park Forest	9,585	58	0.61	$150,800	$1,445,418,000	$467,932
Plainfield	12,359	61	0.49	$313,500	$3,874,546,500	$1,023,107
Sauk Village	3,727	55	1.48	$138,100	$514,698,700	$406,359
Warrenville	5,183	75	1.45	$248,500	$1,287,975,500	$997,106
Wayne	850	8	0.94	$738,400	$627,640,000	$316,035
West Chicago	7,518	76	1.01	$267,000	$2,007,306,000	$1,085,622
Subtotal	284,725	1,390	0.49	$381,832	$108,717,116,200	$23,604,767
Indiana						
Dyer	5,999	64	1.07	$197,100	$1,182,402,900	$674,870
Gary	43,825	32	0.07	$71,700	$3,142,252,500	$122,750
Griffith	7,087	351	4.95	$151,800	$1,075,806,600	$2,850,576
Schererville	11,275	1	0.01	$220,700	$2,488,392,500	$11,807
Subtotal	68,186	448	0.66	$160,325	$10,931,920,450	$3,660,005
Total[a]	352,911	1,838	0.52	$271,079	$119,649,036,650	$27,264,772

Note:
[a] The total is the Illinois subtotal and Indiana subtotal added.

Table 2.8-7, below, shows the calculations used to estimate the loss in property tax revenues for each jurisdiction along the EJ&E rail line as a result of the Proposed Action. SEA expects that the results are conservative, based in part on the reasons and assumptions stated above. For example, in Cook County assessed values are calculated at 10 to 16 percent of actual values; SEA used 20 percent to

provide some overstatement of effects. For the jurisdictions outside Cook County, Illinois, residential property is assessed at 33 percent of actual value; SEA used a rate of 35 percent. For jurisdictions in both Cook County and another county, SEA used a rate of 35 percent.

Considering that the single unit residential property value element is only one component of each jurisdiction's property tax base, which also includes multi-unit residential, commercial, and industrial properties, effects on tax revenues of jurisdictions and programs should be relatively small.

Table 2.8-7. Property Tax Revenue Effects by Jurisdiction of Collection

Location	(e) Estimated Total Single Unit Residential Property Value (e)=(a) x (d)	(f) Estimated Single Unit Residential Property Value Effect (Loss) (f)=(b) x (d) x 0.0535	(g) Estimated Loss in Assessed Value (g)=(f) x 20 percent or 35 percent	(h) Tax Rates (Percent)[a]	(i) Tax Revenue Effect (i)=((g) x (h))-1
Illinois					
Aurora	$11,897,476,800	$1,940,873	$679,306	7.003	-$47,568
Barrington	$2,365,663,500	$3,689,975	$1,291,491	5.317	-$68,669
Barrington Hills	$1,989,474,300	$1,138,362	$398,427	N/A[c]	-$39,843
Bartlett	$5,274,104,400	$1,780,897	$623,314	7.262	-$45,265
Chicago Heights	$1,953,859,600	$525,648	$105,130	12.496	-$13,137
Crest Hill	$1,254,888,600	$282,641	$98,924	0 in DCEO[c]	-$9,892
Crystal Lawns	$199,717,200	$204,691	$71,642	N/A[c]	-$7,164
Deer Park	$766,822,400	$565,602	$197,961	N/A[c]	-$19,796
Elgin	$8,255,566,200	$238,182	$83,364	0.085167	-$7,100
Frankfort	$2,310,821,500	$1,954,772	$684,170	0.071301	-$48,782
Hawthorn Woods	$1,512,687,700	$961,465	$336,513	N/A[c]	-$33,651
Hoffman Estates	$6,095,268,400	$469,029	$93,806	0.08167	-$7,661
Joliet	$10,076,480,400	$961,042	$336,365	0.069124	-$23,251
Lake Zurich	$2,268,794,100	$2,114,577	$740,102	0.06152	-$45,531
Long Grove	$2,151,252,600	$372,617	$130,416	0 in DCEO[c]	-$13,042
Lynwood	$782,224,400	$13,461	$2,692	0.09042	-$243
Matteson	$1,622,449,400	$1,601,448	$320,290	0.10564	-$33,835
Mokena	$2,254,539,000	$36,701	$12,845	0.070068	-$900
New Lenox	$2,347,409,500	$456,623	$159,818	0.071593	-$11,442
Park Forest	$1,445,418,000	$467,932	$163,776	0.17823	-$29,190
Plainfield	$3,874,546,500	$1,023,107	$358,088	0.069248	-$24,797
Sauk Village	$514,698,700	$406,359	$81,272	0.14008	-$11,385
Warrenville	$1,287,975,500	$997,106	$348,987	0.061726	-$21,542
Wayne	$627,640,000	$316,035	$110,612	N/A[c]	-$11,061
West Chicago	$2,007,306,000	$1,085,622	$379,968	0.075812	-$28,806
Subtotal (Illinois)	$108,717,116,200	$23,604,767			-$603,553

Table 2.8-7. Property Tax Revenue Effects by Jurisdiction of Collection					
	(e)	(f)	(g)	(h)	(i)
Location	Estimated Total Single Unit Residential Property Value (e)=(a) x (d)	Estimated Single Unit Residential Property Value Effect (Loss) (f)=(b) x (d) x 0.0535	Estimated Loss in Assessed Value (g)=(f) x 20 percent or 35 percent	Tax Rates (Percent)[a]	Tax Revenue Effect (i)=((g) x (h))-1
Indiana					
Dyer	$1,182,402,900	$674,870	N/A[c]	0.0271	-$18,289
Gary	$3,142,252,500	$122,750	N/A[c]	0.0271	-$3,327
Griffith	$1,075,806,600	$2,850,576	N/A[c]	0.0271	-$77,251
Schererville	$2,488,392,500	$11,807	N/A[c]	0.0246	-$291
Subtotal (Indiana)	$10,931,920,450	$3,660,005			-$99,157
Total[b]	$119,649,036,650	$27,264,772			-$702,710

Notes:
[a] Illinois Department of Commerce and Economic Opportunity.
[b] The total is the Illinois subtotal and Indiana subtotal added.
[c] N/A: Data were not available.

Table 2.8-8, below, presents the project-related property tax revenue loss by jurisdictional recipient of the revenue. In most cases, property tax revenues are distributed among the city where the property is located, the county, the school district, and an "other" category that could include a variety of special taxing districts.

In all cases, the estimated loss to city and county revenues would be less than $10,000. Only in Barrington would the estimated loss in revenues to other programs exceed $10,000.

The estimated loss in revenues to schools would exceed $25,000 in a number of jurisdictions. However, property tax rates in the jurisdictions vary from year to year. For example, in the past three years (2005-2007), rates have varied as much as 0.9 percent, which may have a greater effect on programs than the loss in property tax revenues due to the Proposed Action.

Table 2.8-8. Residential Property Tax Loss by Jurisdictional Recipient					
Location	Property Tax Revenue Effect	City Revenue Loss	County Revenue Loss	School Revenue Loss	Other Revenue Loss
Illinois					
Aurora	-$47,568	-$9,332	-$3,531	-$26,911	-$7,795
Barrington	-$68,669	-$6,832	-$5,734	-$42,516	-$13,586
Barrington Hills	-$39,843	N/A[a]	N/A[a]	N/A[a]	N/A[a]
Bartlett	-$45,265	-$5,179	-$4,047	-$36,039	$0
Chicago Heights	-$13,137	-$3,186	-$940	-$7,937	-$1,074
Crest Hill	-$9,892	N/A[a]	N/A[a]	N/A[a]	N/A[a]
Crystal Lawns	-$7,164	N/A[a]	N/A[a]	N/A[a]	N/A[a]
Deer Park	-$19,796	N/A[a]	N/A[a]	N/A[a]	N/A[a]
Elgin	-$7,100	-$1,603	-$358	-$4,285	-$854
Frankfort	-$48,782	-$2,603	-$4,463	-$33,014	-$8,702
Hawthorn Woods	-$33,651	N/A[a]	N/A[a]	N/A[a]	N/A[a]
Hoffman Estates	-$7,661	-$845	-$513	-$5,136	-$1,167
Joliet	-$23,251	-$3,734	-$2,142	-$15,715	-$1,660
Lake Zurich	-$45,531	-$6,409	-$3,330	-$30,988	-$4,803
Long Grove	-$13,042	$0	-$1,443	-$11,598	$0
Lynwood	-$243	-$19	-$7	-$182	-$35
Matteson	-$33,835	-$3,248	-$3,606	-$25,751	-$1,230
Mokena	-$900	-$30	-$73	-$592	-$206
New Lenox	-$11,442	-$616	-$841	-$7,735	-$2,250
Park Forest	-$29,190	-$8,173	-$876	-$18,390	-$1,751
Plainfield	-$24,797	-$1,461	-$1,801	-$16,465	-$5,070
Sauk Village	-$11,385	-$1,794	-$492	-$7,720	-$1,378
Warrenville	-$21,542	-$2,424	-$1,053	-$14,208	-$3,857
Wayne	-$11,061	N/A[a]	N/A[a]	N/A[a]	N/A[a]
West Chicago	-$28,806	-$1,610	-$1,216	-$21,120	-$4,861
Total[b]	-$603,553	-$59,098	-$36,466	-$326,302	-$60,279

Notes:
[a] N/A: Data not available.
[b] The total of the available values.

2.8.4 Residential Property Effects from the CN Rail Lines

Commenters were also interested in the number of residences in the vicinity of the CN rail lines and the effects of reduced train traffic on property values.

SEA identified single-family residential units within 300 feet of the CN rail lines using geographic information systems (GIS) technology and 2007 aerial photographs (see Table 2.8-9, below). Population densities are much higher in Chicago, and this is demonstrated by the higher number of single-family housing units within 300 feet of the CN rail lines.

SEA did not attempt to calculate the effect of reducing the number of trains on the CN rail lines as a result of the Proposed Action since other trains would continue to use these tracks. SEA was unable

to locate literature that estimated the effects of partially reducing train traffic through residential areas.

Table 2.8-9. Estimated Number of Single Unit Residences on the CN Rail Lines			
Location	(a)	(b)	(c)
	2007 Estimated Total Single Housing Units	Homes within 300 Feet of Tracks	(c)=100 x (b)/(a) Percent of Affected Single Housing Units
Illinois			
Bartlett	14,418	200	1.39
Berkeley	1,944	15	0.77
Berwyn	20,727	196	0.95
Blue Island	8,985	70	0.78
Broadview	3,324	70	2.11
Buffalo Grove	16,479	64	0.39
Chicago	1,161,741	2,733	0.24
Cicero	24,642	128	0.52
Des Plaines	23,253	297	1.28
Dixmoor	1,528	15	0.98
Elmhurst	18,052	248	1.37
Evergreen Park	7,677	345	4.49
Flossmoor	3,690	80	2.17
Franklin Park	6,648	105	1.58
Glendale Heights	11,607	48	0.41
Hanover Park	11,597	176	1.52
Harvey	10,268	181	1.76
Hillside	3,112	77	2.47
Homewood	7,966	40	0.50
Lansing	11,941	180	1.51
Markham	4,146	27	0.65
Matteson	6,721	28	0.42
Merrionette Park	1,058	84	7.94
Mount Prospect	22,136	93	0.42
North Riverside	2,990	106	3.55
Olympia Fields	2,025	23	1.14
Park Forest	9,585	11	0.11
Phoenix	863	6	0.70
Posen	1,896	7	0.37
Prospect Heights	6,649	7	0.11
River Forest	4,275	142	3.32
River Grove	4,527	11	0.24
Riverdale	5,446	128	2.35
Riverside	3,724	10	0.27
Rosemont	1,749	17	0.97
Schiller Park	4,390	36	0.82

Table 2.8-9. Estimated Number of Single Unit Residences on the CN Rail Lines			
Location	(a)	(b)	(c)
	2007 Estimated Total Single Housing Units	Homes within 300 Feet of Tracks	(c)=100 x (b)/(a) Percent of Affected Single Housing Units
South Holland	8,025	168	2.09
Vernon Hills	9,081	204	2.25
Villa Park	8,117	45	0.55
Westchester	7,134	102	1.43
Wheeling	13,992	8	0.06
Subtotal (Illinois)	1,498,128	6,531	0.44
Indiana			
Griffith	7,087	26	0.37
Highland	10,180	90	0.88
Munster	8,803	66	0.75
Subtotal (Indiana)	**26,070**	**182**	**0.70**
Total Single Unit Residences[a]	**1,524,198**	**6,713**	**0.44**

Note:
[a] The total is the Illinois subtotal and Indiana subtotal added.

Based on the comments on the Draft EIS, SEA also conducted additional analysis of the potential effects of the Proposed Action on property values. In general, the additional analysis supports SEA's conclusions in the Draft EIS that communities and residents near the EJ&E rail line may experience minor adverse local effects on property values. Based on the analysis in the Draft EIS, the comments on the Draft EIS, and the additional evaluation described above, SEA concludes that the existence of a rail line in the community has been accounted for in the value of property near both the EJ&E and CN rail line segments. The Proposed Action could have a minor beneficial effect on residential property value near the CN rail line segments inside the EJ&E arc, although the effects have not been quantified, and rail traffic would continue along the CN rail line segments. The Proposed Action would have a minor adverse effect on residential property values along the EJ&E rail line segments where train traffic would increase. Finally, there would be effects to property taxes, but they would be minor.

2.9 Environmental Justice

SEA has updated the environmental justice analysis presented in the Draft EIS to include additional analyses of noise, safety, and delay and a revised calculation to identify the census block groups that are classified as environmental justice. SEA inadvertently used 2006 U.S. Census American Community Survey data rather than the 2000 U.S. Census data. In addition, double-counting of some minority populations occurred in the calculation of the percentage of minority populations. The analysis in this Final EIS has been revised to reflect calculations based on the 2000 U.S. Census data and to eliminate the double-counting of any minority populations.

In the Draft EIS, SEA identified the criteria for identifying low-income and minority environmental justice census block groups. SEA used the following environmental justice criteria to identify minority and low-income status in affected communities:

- At least one-half of the census block group is of minority status
- At least one-half of the census block group is of low-income status
- The percentage of minority status is at least 10 percentage points higher than for the entire county in which the population is located
- The percentage of low-income status is at least 10 percentage points higher than for the entire county in which the population is located

In addition, to identify and evaluate low-income communities by census block, SEA also calculated the percentage of these groups in each county. Table 2.9-1, below, presents percentages of minority and low-income populations per county used in the Draft EIS and the revised percentages of minority and low-income populations per county used by SEA to identify minority and low-income populations.

Table 2.9-1. Minority and Low-Income Status Calculated by County

County	Minority Census Block Groups		Low-Income Census Block Groups	
	Presented in Draft EIS	Revised	Presented in Draft EIS	Revised
Lake, IL	48.3%	36.6%	15.6%	15.7%
Cook, IL	50.0%	50.0%	25.3%	23.5%
DuPage, IL	41.1%	31.3%	14.9%	13.6%
Will, IL	46.4%	32.6%	15.8%	14.9%
Lake, IN	50.0%	49.4%	26.7%	22.2%

In the Draft EIS, SEA identified 67 census block groups that meet the minority environmental justice status and 26 census block groups that meet the low-income environmental justice status. As a result of the revised values presented in Table 2.9-1, SEA identified 67 census block groups meet the minority environmental justice status and 31 census block groups meet the low-income environmental justice status. The change in identified minority and low-income populations only increased by five block groups under the revised evaluation.

In Section 4.7.3.1 of the Draft EIS, SEA summarized the effects of safety or delay and noise on minority and low-income populations due to the Applicants' proposed change in train operations. SEA concluded that there would be no high and adverse effects on safety or delay, so no analysis was undertaken to determine whether the effects would be disproportionately experienced by minority or

low-income populations in the study area. SEA concluded that there would be high and adverse effects from noise but that these effects would not be disproportionately experienced by minority or low-income populations. SEA reviewed the additional analysis of safety, delay and noise and the revised calculations on minority and low-income populations to determine whether the conclusions in Section 4.7.3.1 of the Draft EIS are still valid. Indications are outlined below.

2.9.1 Effects on Minority Populations Based on Revised Data

The additional analysis of safety and traffic delay on minority populations indicates that they would not experience a high and adverse effect. There are no changes to the number of crossings with safety and delay effects or to the number of affected environmental justice and non-environmental justice census block groups. Since this analysis confirms the conclusion in the Draft EIS that there are no high and adverse effects on safety and delay this analysis was undertaken to determine whether the effects would be disproportionately experienced by minority populations.

High and adverse train noise effects are identified where the noise levels are equal to 70 dBA Ldn or greater. Approximately two-thirds (44 census block groups) of the environmental justice census block groups along the EJ&E rail line would experience a high and adverse train noise effect, and approximately 80 percent (75 census block groups) of the non-environmental justice census block groups would experience high and adverse train noise effects. Based on SEA's analysis of train noise effects on environmental justice communities, it was determined that environmental justice communities would experience high and adverse effects from train noise. However, SEA concluded that high and adverse train noise effects would not be disproportionately borne by environmental justice communities.

Therefore, SEA has confirmed that minority populations along the EJ&E rail line would not experience disproportionate effects on safety and delay or from train noise at highway/rail at-grade crossings. This conclusion is unchanged based on analysis in the Draft EIS.

2.9.2 Effects on Low-Income Populations

The additional analysis of safety and traffic delay on minority populations indicates that no low-income populations would experience a high and adverse effect. There are no changes to the number of crossings with safety and delay effects, and there are low effects to the same number of census block groups as reported in the Draft EIS. This analysis is consistent with the conclusion in the Draft EIS that there are no high and adverse effects on safety and delay. Thus, no analysis was undertaken to determine whether the effects would be disproportionately experienced by low-income populations.

High and adverse train noise effects are identified where the noise levels are equal to 70 dBA Ldn or greater. Based on this criterion, low-income census block groups would experience high and adverse train noise effects. Twenty-four census block groups that meet the environmental justice criteria for low-income status would experience high and adverse train noise effects and 95 non-environmental justice block groups would experience high and adverse train noise effects. SEA concluded that the high train noise effects caused by the Proposed Action would not be disproportionately borne by low-income environmental justice populations.

SEA has determined that low-income populations along the EJ&E rail line would not experience disproportionate effects from either train noise or safety and delay issues at highway/rail at-grade crossings. This conclusion is unchanged from the Draft EIS.

2.10 Air Quality and Climate Change

2.10.1 Air Quality

Sections 3.9 and 4.9 of the Draft EIS presented a quantitative analysis of emissions from automobiles delayed near highway/rail at-grade crossings. The Draft EIS included quantitative analysis of localized air quality effects of motor vehicle emissions from vehicles delayed near highway/rail at-grade crossings, and qualitatively addressed the potential for localized air quality effects of locomotive emissions.

A number of comments received on the Draft EIS raised concerns about localized effects on air quality as a result of locomotive emissions. To address these concerns, SEA conducted additional air quality analysis using dispersion modeling described below. This quantitative analysis addressed two types of emissions scenarios: 1) emissions from moving trains; and 2) emissions from idling trains on sidings. This analysis evaluates the effects of locomotive emissions on levels of:

- Criteria air pollutants — those for which National Ambient Air Quality Standards (NAAQS) have been established
- Mobile source air toxic (MSAT) pollutants – which are not regulated by NAAQS, but for which EPA has established thresholds for assessing possible effects on public health.

The methodology and results of the additional air quality analysis are described below.

2.10.1.1 Additional Analysis

Dispersion Model Selection

SEA used the current regulatory version of the AERMOD dispersion model (Version 07026, executed with the regulatory default and rural area options) to estimate effects on air quality from both moving and idling locomotives. This model is approved by the EPA.

Meteorological Input Data

SEA processed meteorological data dating from 1988 through 1992, with EPA's AERMET software (Version 06341) using surface meteorological data from the National Weather Service Station at Chicago O'Hare Airport (WBAN 94846), upper air data from the Greater Peoria Airport (WBAN 14842), and land use data from EPA's AERSURFACE software (Version 08009).

Modeled Scenarios

SEA subjected two simple emissions scenarios to dispersion modeling to assess the potential for effects on air quality. One scenario addressed moving trains and the other scenario addressed stopped/idling trains. These scenarios were applied to a generic stretch of track assumed to be 50 feet from the edge of nearest ROW. Two orientations were modeled for each scenario: 1) a North-South track orientation and 2) an East-West track orientation.

Analysis for the moving train scenario was based on a maximum of 42.3 trains per day. This corresponds to the highest level of train traffic on the EJ&E rail line, which is projected to occur in Will County near Joliet.

For the stopped/idling train scenario, SEA analyzed the overall capacity of the EJ&E rail line and confirmed that the 42.3 trains per day value is effectively "at capacity" for the highest train traffic rail segment near Joliet. SEA estimated that, when operated at capacity, the maximum total-train wait-time on sidings would be equivalent to 1.6 hours per train, per transit (one-way trip). This implies

approximately 68 hours of train idling time per day. Theoretically, almost 24 hours of that total could occur on a particular siding. On average, approximately half the trains move in each direction and locomotives are usually at the front end of the train. To estimate effects on air quality, SEA assumed that:

- 24 hours of idling would occur on a single siding
- With each train stoppage, locomotives would stop within the length of a locomotive (75 feet) at either end of a siding
- Idling would occur at either end of the siding half of the time
- Each train was assumed to have two operating locomotives

According to the Applicant's information request response dated February 15, 2008, a typical train uses one model SD-40 (3,000 hp) locomotive and one model Dash-9 (4,400 hp) locomotive.

Source and Receptor Geometry

For the moving train scenario, the emissions from moving trains were evenly distributed between adjacent volume sources input to AERMOD to simulate a continuous line source centered over the track. The line source was given a total length of 2 miles. Receptors, meaning points at which the model calculates concentrations, were placed at the mid-point of the line source, thus resulting in a mile of line source extending in each direction from the receptors. The receptors were placed in a line perpendicular to the track starting at 50 feet away (assumed edge of ROW) on both sides of the track, and spaced every 50 feet, extending out to 250 feet away on both sides of the track. This was determined, based on model results, to be sufficient to capture the maximum modeled concentrations for each averaging period.

For the idling train scenario, emissions were entered into AERMOD as two volume sources, each the size of a single locomotive (75 feet long, 10 feet wide, and 15 feet high), and having a release height of 15 feet. The two volume sources were placed 75 feet apart, which is the approximate distance between exhaust portals on the locomotives when they are facing the same direction. Receptors for this scenario were placed 50 feet from the center of the track, on both sides of the track, and spaced at 50-foot intervals both perpendicular to and parallel to the track.

SEA assumed flat terrain between the source (track) elevation and the receptor elevations. Results based on this assumption are expected to be somewhat conservative (high) because railroad grades are usually built slightly above the existing ground surface, thus putting the actual plumes at slightly greater elevation than modeled.

Source release parameters were based on AERMOD guidance and on model inputs for dispersion studies of locomotives at rail yards in California. The release height for the moving train scenario (20 feet) accounts for slight plume rise, given the exhaust plume momentum and buoyancy for a moving train. For the idling train scenario, the release height was set to the exhaust portal height, and did not account for the slight plume buoyancy from an idling train.

The "initial sigma-y," or horizontal plume spread, for a line source is based on EPA modeling guidance, which specifies that the value should be equal to the spacing of volume sources divided by 2.15 (see Table 3-1 of the AERMOD model User's Guide). The same factor applies to the "initial sigma-z," or vertical plume spread, for a volume source on or adjacent to a building, or in this case, the train. The source release parameters used in the analysis are provided in Table 2.10-1, below. Note that the initial sigma-y refers to the standard deviation of the plume horizontal concentration distribution, and the initial sigma-z refers to the standard deviation of the plume vertical concentration distribution.

Table 2.10-1. AERMOD Emission Source Release Parameters		
Input Parameter	Moving Train Scenario	Idling Train Scenario
Emission Rate	1.0 gram/sec (per volume source)	1.0 gram/sec (per locomotive)
Release Height	20 feet (6.1 m)	15 feet (4.57 m)
Initial Sigma-y	46.51 feet (14.18 m)	34.88 feet (10.63 m)
Initial Sigma-z	6.98 feet (2.13 m)	6.98 feet (2.13 m)

Emission Rates

To run AERMOD, SEA input emission rates of 1.0 grams/sec to the model for each of the emission sources entered into each model run. The modeled concentrations for this unit emission rate were then multiplied by the estimated emission rate in grams per second for each pollutant of interest, to obtain concentration estimates for that pollutant. For both the moving and idling scenarios, emission rates were based on test data for locomotives similar to the typical Applicants' locomotives referenced above. The emissions data for the tested locomotives are listed in Appendix A of this Final EIS.

For the moving train scenario, SEA determined that moving trains would use a throttle setting of Notch 3 (besides idle and dynamic braking settings, locomotives have eight throttle settings, or "notches" with eight as the highest or most powerful setting). Because test data used as inputs to this analysis were collected from line haul locomotives used in 1999, the fleet emissions from actual CN trains are expected to be lower. EPA emissions standards for both new and remanufactured locomotives are forcing locomotive fleet-average emission levels downward, and they will ultimately become much lower than emissions used for this analysis. Thus, the modeled emissions used here are considered to be conservatively high.

The idling train scenario accounted for the Applicant's voluntary mitigation, which includes shutting off locomotives when the temperature is above 40ºF. Based on climate data for O'Hare Airport, average monthly temperatures are below 40ºF in December, January, February and March. Therefore, the "monthly scalars" option was used in AERMOD to turn off the emissions for the remainder of the year under the idling scenario.

As stated above, maximum train idling time for all combined trains operating on the EJ&E rail line under the Proposed Action is estimated to be 12 hours per day, at any one location. Data entered into AERMOD were based on the assumption that all idling would be at the same location. The emissions estimates and the source of the individual emission rates used in this study are provided in Appendix A of this Final EIS.

2.10.1.2 Results and Findings

Criteria Pollutant Results

The dispersion modeling results for criteria pollutants under a moving train scenario are listed in Table 2.10-2, below, where concentrations are measured in micrograms per cubic meter of air (ug/m3). The modeled concentrations of carbon monoxide (CO) and sulfur dioxide (SO_2) are negligible, meaning they are below the Significant Impact Levels (SIL) set by EPA. Note that concentrations above the SIL are not necessarily "significant" in a NEPA context.

The modeled maximum concentration of nitrogen dioxide (NO_2) is above the SIL, but when added to the background concentration, the total concentration is well below the NAAQS. For NO_2, the maximum modeled concentration of nitrogen oxides (NO_x) was multiplied by EPA's recommended default NO_2/NO_x ratio of 0.75 (see 40 CFR 51, Appendix W) to obtain a conservatively high concentration estimate.

The modeled effect of particulate matter smaller than 10 microns in diameter (PM_{10}) is also considered negligible. For particulate matter smaller than 2.5 microns in diameter ($PM_{2.5}$), the EPA has not set the SIL, but proposed a possible range of levels in September 2007. The maximum-modeled $PM_{2.5}$ concentrations for both the 24-hour and annual average periods are essentially right at the lower end of the range targeted by EPA. Thus, these levels are likely to be considered negligible, once EPA selects a SIL for $PM_{2.5}$. While monitoring data show the existing concentrations are slightly over the current 24-hour $PM_{2.5}$ NAAQS, EPA is working to bring this and many other areas of the nation into compliance by applying tighter emission standards to stationary and mobile emissions sources.

Table 2.10-2. Criteria Pollutant Modeling Results for Moving Train Scenario

NAAQS Pollutant (Rank)	Averaging Period	Modeled Max. Conc. (ug/m3)	SIL[a] (ug/m3)	Will County Monitored Backgd[b] (ug/m3)	Modeled + Monitored Total (ug/m3)	NAAQS (ug/m3)
CO (2nd high)	1-hour	51	2000	1410	1461	40,000
CO (2nd high)	8-hour	24	500	914	938	10,000
NO_2 (high)	Annual	15.1	1	53	68	100
PM_{10} (2nd high)	24-hour	1.8	5	40	42	150
$PM_{2.5}$ (98th %)	24-hour	1.1	1.2-5.0[c]	36.7	37.8	35
$PM_{2.5}$ (high)	Annual	0.4	0.3-1.0[c]	14.1	14.5	15
SO_2 (2nd high)	3-hour	0.14	25	133	133	1300
SO_2 (2nd high)	24-hour	0.04	5	45	45	365
SO_2 (high)	Annual	0.01	1	11.4	11.4	80

Notes:

a Significant Impact Level as listed under 40 CFR 51.165. Concentration contributions below this level are considered to be too low to hold a source responsible.

b Background concentrations based on average of "ranked" values to which the NAAQS applies, for the most recent available 3 years of monitoring data for each pollutant.

c Value not yet established. Range of proposed values, per EPA proposed rule publication in Sept. 21, 2007 *Federal Register*.

The dispersion modeling results for criteria pollutants from an idling train scenario are listed in Table 2.10-3 below, where concentrations are measured in micrograms per cubic meter of air (ug/m3). The maximum-modeled concentrations of CO and SO_2 are negligible, as they are below the SILs set by EPA. The maximum-modeled concentration of NO_2 is above the SIL, but when added to the background concentration, the total concentration is well below the NAAQS. As with the moving train modeling, SEA used EPA's recommended default NO_2/NO_x ratio of 0.75 (see 40 CFR 51, Appendix W) to obtain a conservatively high NO_2 concentration estimate.

The modeled maximum concentration of PM_{10} is above the SIL for the idling train scenario, but when added to the background concentration, the total concentration is well below the NAAQS.

The maximum-modeled $PM_{2.5}$ concentrations for both the 24-hour and annual average periods are within the range of SILs targeted by EPA. Thus, these modeled concentrations might be considered non-negligible based on EPA's final selection of a SIL for $PM_{2.5}$. This calculation, however, is based on very conservative assumptions, as described in the Methodology section above, particularly that each locomotive idling on a siding would stop at the same exact location on the siding as other locomotives on the day of the highest-modeled concentration. Furthermore these $PM_{2.5}$ concentration

estimates are based on the greatest 98th percentile effect in any year out of five years of meteorological data. The likelihood of multiple trains idling at exactly the same location for enough days per year (seven days/year is approximately equivalent to the 98th percentile), for the seven days of the most adverse meteorological conditions, is extremely small.

Table 2.10-3. Criteria Pollutant Modeling Results for Idling Train Scenario

NAAQS Pollutant (Rank)	Averaging Period	Modeled Max. Conc. (ug/m3)	SIL[a] (ug/m3)	Will County Monitored Backgd [b] (ug/m3)	Modeled + Monitored Total (ug/m3)	NAAQS (ug/m3)
CO (2nd high)	1-hour	284	2000	1410	1694	40,000
CO (2nd high)	8-hour	120	500	914	1034	10,000
NO_2 (high)	Annual	13.1	1	53	66	100
PM_{10} (2nd high)	24-hour	5.0	5	40	45	150
$PM_{2.5}$ (98th %)	24-hour	3.5	1.2-5.0[c]	36.7	40.2	35
$PM_{2.5}$ (high)	Annual	0.6	0.3-1.0 [c]	14.1	14.7	15
SO_2 (2nd high)	3-hour	0.73	25	133	134	1300
SO_2 (2nd high)	24-hour	0.14	5	45	45	365
SO_2 (high)	Annual	0.02	1	11.4	11.4	80

Notes:

a Significant Impact Level as listed under 40 CFR 51.165. Concentration contributions below this level are considered to be too low to fold a source responsible.

b Background concentrations based on average of "ranked" values to which the NAAQS applies, for the most recent available 3 years of monitoring data for each pollutant.

c Value not yet established. Range of proposed values, per EPA proposed rule publication in Sept. 21, 2007 *Federal Register*.

The maximum modeled concentrations of all these pollutants occur at distances ranging from 50 to 100 feet from the track. The model results indicate that concentrations fall off rapidly with distance, to approximately one-fourth of the maximum values, at a distance of 250 feet from the track.

The EPA's 2008 regulations for locomotive emissions, which apply to new and rebuilt locomotives, are expected to dramatically reduce emissions of both particulate matter and NO_x. As locomotive fleets across the country age and are replaced, the new standards will reduce fleet-wide NO_x and PM emissions up to 80-90 percent below current emissions levels. EPA's new regulations focus on these two pollutants, which were the only criteria pollutants with modeled concentrations above SILs based on SEA's air quality analysis for the EJ&E rail line.

Mobile Source Air Toxic (MSAT) Pollutant Results

For both the moving trains and idling trains emissions scenarios, SEA estimated effects on air quality from mobile source air toxic (MSAT) pollutants. The results of this analysis are provided in Table 2.10-4 and Table 2.10-5, below, for moving and idling trains. The model results for the moving train scenario show that all MSAT maximum modeled concentrations are below the listed EPA's Integrated Risk Information System (IRIS) thresholds.

Table 2.10-4. MSAT Pollutant Modeling Results for Moving Train Scenario			
MSAT Pollutant	Averaging Period [a]	Modeled Max. Conc. (ug/m3)	IRIS[b] Threshold (ug/m3)
Acetaldehyde	24-hour	0.075	9
Acetaldehyde	Annual	0.012	50
Acrolein	24-hour	0.010	0.02
Benzene	24-hour	0.014	30
Benzene	Annual	0.002	45
1,3-Butadiene	24-hour	0.012	2
1,3-Butadiene	Annual	0.002	3
Formaldehyde	Annual	0.024	8
Diesel Exhaust (DPM)	24-hour	2.4	5

Notes:

a The 24-hour IRIS limits for each pollutant are set to protect against acute non-cancer effects - annual IRIS thresholds are set to establish risk of developing cancer. The "annual" levels listed actually represent 70-year lifetime exposure levels, estimated to result in a 1/10,000 risk of developing cancer. To adjust the cancer risk to 1/100,000, divide the listed annual IRIS concentration by 10.

b The IRIS database, available on-line at http://cfpub.epa.gov/ncea/iris/index.cfm, contains EPA's recommended exposure limits to provide a margin of protection for public health.

The model results for the idling train scenario (Table 2.10-5) show that all MSAT effects are below the listed IRIS threshold except for acrolein and diesel exhaust, which is similar to diesel particulate matter (DPM).

Acrolein

Acrolein is a chemical compound emitted as a product of incomplete combustion by locomotive engines (as well as other diesel- and gasoline-powered engines). In fact, many types of combustion, including cigarette smoking, can produce acrolein. As documented in the IRIS database, EPA was very conservative in setting the threshold for acrolein, based on the Lowest Observed Adverse Effects Level of 20 $\mu g/m^3$, the concentration at which after exposure, rats developed nasal sores. EPA divided this value by 1,000 to create a significant safety margin with respect to human exposure, setting a Reference Concentration (RfC) threshold of 0.02 $\mu g/m^3$.

A recent review by the Health Effects Institute (HEI 2007) provides a summary of measured acrolein concentrations in various settings, including motor vehicles, open air, and residences. HEI's review summarized several studies and listed the average concentrations for each study and setting. All of the measured average concentrations of acrolein summarized by HEI were above the 0.02 µg/m3 IRIS threshold and the majority of the exposures were far above this concentration. A recent study collected hundreds of samples of "personal exposures" of adults and children over 2-day periods, and found average concentrations over the 2-day period ranged from 10.9 to 12.9 µg/m3.

After reviewing measurement data summarized by HEI, SEA notes that people are generally exposed to acrolein concentration levels at one to two orders of magnitude higher than the maximum acrolein concentration in Table 2.10-5, below, with no apparent ill effects. Based on the data from the HEI study, and the fact that the EPA has established a very conservative threshold, it is apparent that the maximum-modeled acrolein concentration presents negligible risk to public health in comparison to risks to which people are already exposed through living in urban environments.

Table 2.10-5. MSAT Pollutant Modeling Results for Idling Train Scenario			
MSAT Pollutant	Averaging Period[a]	Modeled Max. Conc. (ug/m3)	IRIS[b] Threshold (ug/m3)
Acetaldehyde	24-hour	1.10	9
Acetaldehyde	Annual	0.10	50
Acrolein	24-hour	0.23	0.02
Benzene	24-hour	0.13	30
Benzene	Annual	0.01	45
1,3-Butadiene	24-hour	0.14	2
1,3-Butadiene	Annual	0.01	3
Formaldehyde	Annual	0.22	8
Diesel Exhaust (DPM)	24-hour	6.2	5

Notes:

[a] The 24-hour IRIS limits for each pollutant are set to protect against acute non-cancer effects, and the annual IRIS thresholds were set to establish risk of developing cancer. The "annual" levels listed actually represent 70-year lifetime exposure levels estimated to result in a 1/10,000 risk of developing cancer. To adjust the risk to 1/100,000 one needs to simply divide the listed concentration by 10.

[b] The EPA's Integrated Risk Information System (IRIS) database, available on-line at http://cfpub.epa.gov/ncea/iris/index.cfm, contains EPA's recommended exposure limits to provide a margin of protection for public health.

Diesel Exhaust/Diesel Particulate Matter (DPM)

The maximum-modeled 24-hour DPM value is slightly above the threshold set by EPA to be protective against acute (short-term) effects on public health. However, as described earlier, SEA applied a conservative methodology by assuming that all locomotive stop points from multiple trains would be exactly aligned, so that emissions would be concentrated at two points. Additionally, the PM emission rates entered into the dispersion modeling analysis were based on locomotive test data obtained on operating locomotives in the year 2000, before the locomotive fleet was significantly affected by the 1998 EPA locomotive emissions standards. EPA's tighter 2008 emissions standards will drive PM emission rates down from the fleet even faster. Because the modeled concentrations are linear with emission rate, the modeled concentrations would decrease proportionally to emissions as locomotive fleets are replaced or overhauled.

Conclusions

SEA's analysis found that the majority of criteria and MSAT pollutant effects were far below levels set to protect public health. Maximum acrolein effects were estimated to exceed the EPA's threshold, but further study found that average daily exposure from other sources far exceeds the small, incremental acrolein level that would be a result of the Proposed Action. With respect to effects from DPM and $PM_{2.5}$ for the idling train scenario, these were slightly over thresholds and could imply a possible concern, especially at locations just outside the rail corridor ROW. However, given the conservative nature of the methodology applied to SEA analysis, coupled with the fact that PM emissions from locomotives will continue to drop, results indicate that idling locomotive PM emissions on the EJ&E corridor would pose minimal threat to public health.

2.10.2 Climate Change

A number of commenters expressed concerns about the effects of the Proposed Action on climate change, and claimed that the Draft EIS had understated the potential, (when combined with other

human activities) to contribute to climate change. The commenters suggested that any such cumulative climate change would be environmentally detrimental. Other comments mentioned the possibility of an increase in the urban heat island effect for the Chicago metropolitan area. The EPA also commented that it would like to see a discussion of current science related to climate change.

The sections below provide SEA's response, to the comments regarding climate change.

2.10.2.1 Current Scientific Understanding

One commenter claimed that the Draft EIS's "dismissive approach to climate change is out-of-date and out of step with the position of the US government and overwhelming, worldwide scientific consensus." A number of other comments repeated this same general theme.

SEA's technical team for climate assessment included atmospheric scientists who have reviewed extensive literature on this subject, including reports produced by a United Nations agency known as the Intergovernmental Panel on Climate Change (IPCC), journal papers, and various publications by a variety of governmental agencies. SEA did not find that there is a single "position" of the US Government or an "overwhelming, worldwide scientific consensus" on all of the issues related to man-made global climate change. However, SEA believes that there is generally a scientific consensus regarding human effects on local climate change via the urban heat island (UHI) effect. SEA's intent in this section is to describe the current science as it relates to climate change and to expand on SEA's conclusions regarding the Proposed Action's effect on climate change.

2.10.2.2 Global Climate Change Science

While there are many viewpoints regarding human-caused effects on global climate, there are three primary positions on global climate change science with respect to greenhouse gas (GHG) emissions:

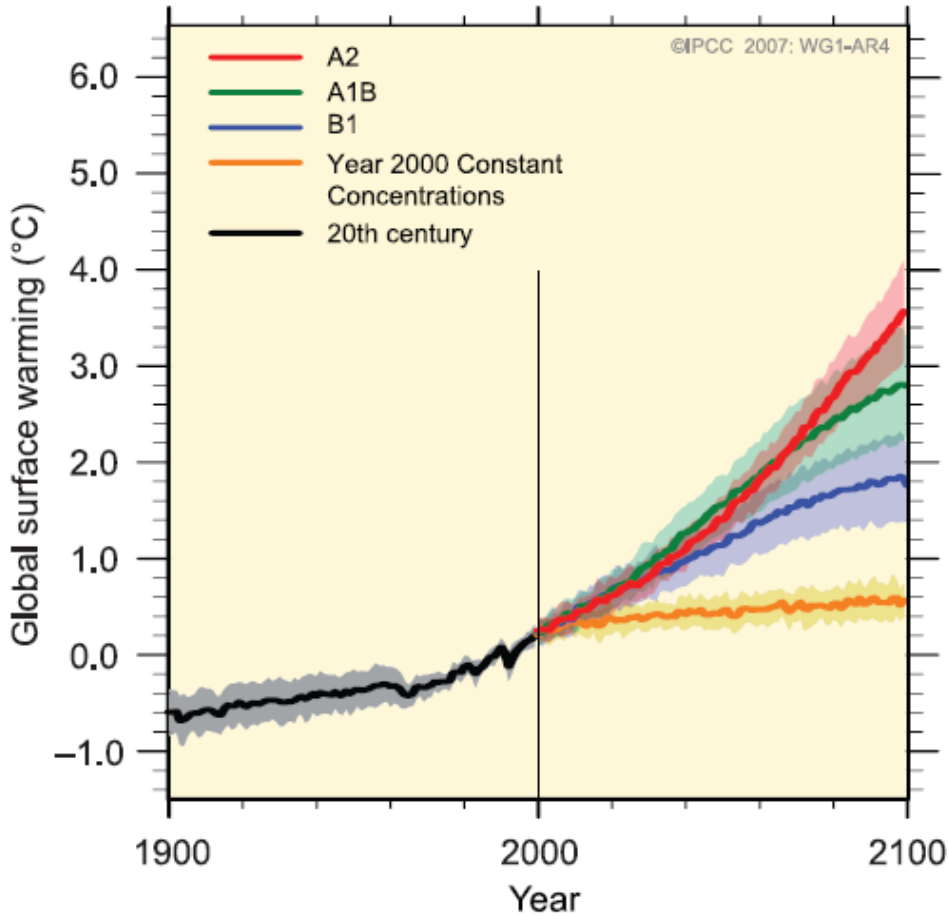
1) The effect of anthropogenic, or man-made, emissions of greenhouse gases (those other than water vapor) is the dominant driver of recent climate change and will continue to be for decades to come, barring elimination of a vast majority of the emissions.
2) The effect of anthropogenic emissions of greenhouse gases on climate is not negligible, but is not the dominant driver of global climate change.
3) The effect of anthropogenic emissions of greenhouse gases on climate is negligible, in part because water vapor provides a negative feedback to greenhouse gas (GHG) "forcing."

Model Projections

The committee that developed the IPCC's "Summary for Policymakers" has concluded that the first position noted above is the most supportable. In support of this conclusion, the IPCC has used computer-based mathematical models called "global circulation models" (GCMs) to simulate the climate's response to a wide range of GHG emissions scenarios. Carbon dioxide (CO_2), the primary anthropogenic GHG, is used as the basis for these IPCC scenarios. Figure 2.10-1, below, shows the results of some IPCC simulations using GCMs to project future global average temperature for various CO_2 emissions and concentrations scenarios.

The four projection curves in Figure 2.10-1, below, represent emissions scenarios that are assumed to result in Year 2100 concentrations of 370 ppm (Year 2000 Constant Concentration curve), 600 ppm (B1 curve), 850 ppm (A1B curve), and 1250 ppm (A2 curve). The lowest curve represents CO_2 concentrations reverting to the year 2000 level and remaining steady until the year 2100. The other three curves reflect increases in CO_2 concentration of approximately 2.3 ppm per year, 4.8 ppm per year, and 8.8 ppm per year, corresponding to the year 2100 concentrations of 600, 850, and 1250 ppm, respectively. For the two most recent years (2007 vs 2006) of complete CO_2 monitoring

Figure 2.10-1. IPCC Projections of Global Warming for Several CO_2 Emissions Scenarios



Source: IPCC 2007

Solid lines are multi-model global averages of surface warming (relative to 1980-1999) for the scenarios A2, A1B, and B1, shown as continuations of the 20th century simulations. Shading denotes the ± 1 standard deviation range of individual model annual averages. The orange line is for the experiment where concentrations were held constant at year 2000 values. The grey bars at right indicate the best estimate (solid line within each bar) and the likely range assessed for the six SRES marker scenarios. The assessment of the best estimate and likely ranges in the grey bars includes the AOGCMs in the left part of the figure, as well as results from a hierarchy of independent models and observational constraints.

data (at Mauna Loa, Hawaii), the average rate of CO_2 increase has been approximately 1.87 ppm per year (NOAA 2008). Thus, the IPCC's scenarios range from a modest increase from recent emissions (2.3 ppm per year) to a nearly a five-fold increase in the rate of CO_2 increase (8.8 ppm per year). Note that the shaded areas around each curve represent the IPCC's estimates of uncertainty for each emissions scenario simulation.

A GCM "is a simplification and simulation of reality, meaning that it is an approximation of the climate system. The first step in any modeled projection of climate change is to first simulate the present climate and compare it to observations. Projections of future climate change depend on how well the computer climate model simulates the climate and on our understanding of how forcing functions will change in the future" (NOAA 2008).

Observational Data

Observations of global temperature and increasing greenhouse gas concentrations provide a basis for comparison with the IPCC's modeled projections. Given the many problems with surface station records, including limited numbers of stations over oceans, Urban Heat Island (UHI – see "Local Climate Change Science" section below) issues, and instrumentation siting issues in non-urban areas, the satellite record may be the best way to monitor global temperatures. Unfortunately, there is only a 30-year record of satellite data, which are used to estimate temperature in a layer of the lower atmosphere, or troposphere. However, a 30-year record is sufficient to see some trends as well as short-term fluctuations.

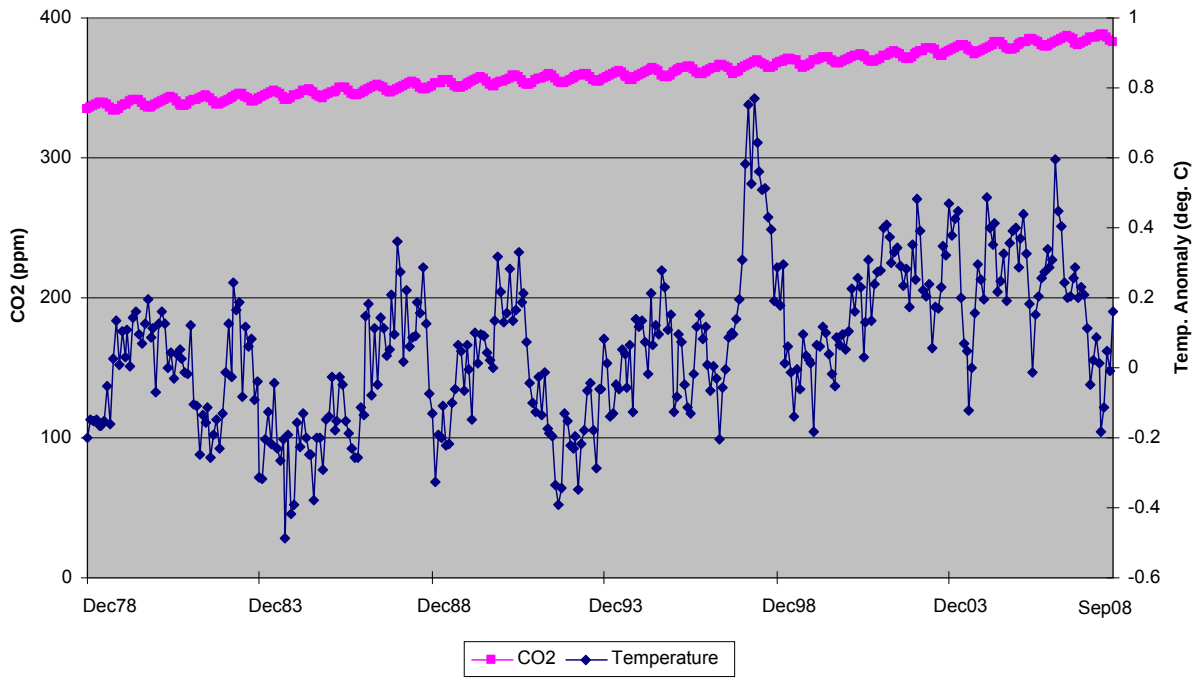
Table 2.10-2, below, compares the trends of nearly 30 years of global temperature, measured via satellite (UAH 2008), with atmospheric CO_2 concentration, measured at Mauna Loa, Hawaii (NOAA 2008). The CO_2 measurements are done on the island of Hawaii because it is removed from large anthropogenic influences, so the measurements should be representative of global, rather than local, trends. As shown below, there has been a steady rise in CO_2, much of it due to fossil fuel use and deforestation. The regular up and down pulsing of CO_2 represents annual variation, as the northern hemisphere biosphere removes CO_2 from the atmosphere during the growing season and releases it in the winter.

The temperature data shown in Figure 2.10-2, below, are based on data collected by satellites, using an instrument called a microwave sounding unit (MSU). The satellite data presented are those analyzed by the University of Alabama at Huntsville (UAH), and represent the lower layer portion of the troposphere (http://vortex.nsstc.uah.edu/public/msu/t2lt/tltglhmam_5.2). Because they represent an average over a vertical layer, and are also averaged across the globe, the data are not as likely to be influenced by station siting issues. They provide much better coverage over oceans as compared to the primarily land-based surface measurement sites. The "temperature anomaly" plotted on the right side of the graph represents the temperature deviation of any given month of data from the mean value based on averaging the data collected from the start of monitoring in December 1978 through December 1999. While this is a somewhat arbitrary period to use as a baseline, it is long enough to average out the short-term fluctuations in the record, and is generally consistent with analyses of these data presented in other forums.

The average temperature trend represented in the UAH data analysis is an increase of approximately 0.13 degrees Celsius (C) per decade, or 1.3 C per 100 years. This value is somewhat lower than the IPCC scenario B1 shown in Figure 2.10-1, above, which represents a CO_2 average rate of increase of 2.3 ppm through 2100, corresponding to an IPCC-projected increase over the current century of approximately 1.5 degrees Celsius. If GHG emissions are the primary driver of recent climate trends, then the IPCC's temperature projections, for Scenario B1 at least, are not at great odds with the past 30 years of satellite observations. However, if a significant portion of the observed warming over the past 30 years is due to natural effects, this could mean that the models are significantly overestimating effects of GHG emissions.

Some natural factors are evident in the temperature record displayed in Figure 2.10-2, below. The most obvious is a very strong El Niño episode in December 1998, which created a spike in global temperatures. El Niño is characterized by higher than normal sea surface temperatures in the eastern equatorial Pacific Ocean; it is widely recognized that these episodes can affect global average temperatures. The opposite of the El Niño effect is La Niña, in which cooler than average sea surface temperatures occur in the same region. This happened in late 2007 and early 2008, and its effects can be seen in the temperature trend above.

Figure 2.10-2. Global Temperature (via Satellite) and CO_2 Trends Since1978



A longer-term Pacific Ocean cycle, considered to affect temperatures globally, is the Pacific Decadal Oscillation (PDO). The PDO cycle is approximately 60 years in length, with approximately 30 years of cool phase followed by 30 years of warm phase and so on. The PDO last switched to a warm phase around 1978, near the time that satellite temperature measurements began. In April 2008, the National Aeronautics and Space Administration (NASA) announced that the PDO had recently switched to a cool phase (NASA 2008). Given that the PDO does affect global average temperatures, it is possible that a significant part of the past 30 years of warming could be influenced by this cycle.

Global Circulation Models (GCM) Models and Climate Change Uncertainties

A recent paper by NASA and other researchers to document the performance of NASA's GCM demonstrates the difficulties it has in predicting the known, past climate conditions (Lynn, et al 2007). In the subject study of summertime (June through August) temperature and precipitation conditions covering nearly the entire eastern half of the US, NASA's model estimated the daily maximum temperatures as an average across the modeled region. The NASA model under-predicted daily maximum temperature by an average of 8.5º F compared to actual observed daily maximum temperatures for the five-year study period (1993-1997). For precipitation, observations indicate approximately 52 centimeters (cm) of precipitation fell on average per summer, with measurable precipitation occurring on approximately 25 percent of the days. NASA's model predicted only 25 cm of precipitation—less than 50 percent of the actual total, and predicted it would fall on approximately 67 percent of the days.

The above findings highlight an uncertainty associated with all current GCMs, due to their inability to successfully simulate the hydrologic cycle. This is in large part due to limitations of the models that cannot properly simulate scales of clouds in general, especially convective cloud systems, which perform most of the vertical moisture distribution in the atmosphere. Water vapor is not only the dominant greenhouse gas in the atmosphere; it also has a major effect on climate through

precipitation and clouds, which reflect sunlight to keep the earth's surface cool, and trap infrared radiation that would otherwise escape to space, thus keeping the earth's surface warm. While the Sun provides the energy for Earth's climate, water, in all its forms is the primary thermostat that moderates temperature. In the case of deserts where water is nearly absent, temperature is not substantially moderated by water vapor or clouds, because of their relative absence.

The authors of the study using the NASA model state: "Unrealistic features of the AOGCM [NASA's GCM] simulation of some climate fields compromise the accuracy of the projections of climate change. However, mindful of the validations of its performance, the AOGCM's simulation of the IPCC A2 climate change scenario (see Figure 2.10-1 and the accompanying discussion above) is as plausible as simulations from other IPCC models…" While the NASA study points out substantial problems with its model, the authors say that, while it is not very good, it is as good as the other GCMs used by the IPCC.

Currently, uncertainties remain surrounding the science of climate change. These uncertainties will remain unless and until advancements in science can be made in the understanding of natural climatic variations, changes in the sun's energy, land-use changes, the warming or cooling effects of pollutant aerosols, and the effects of changing humidity and cloud cover. The relative contribution to climate change of human activities and natural causes must still be determined (EPA 2008). Other uncertainties include the projection of future greenhouse gas emissions and how the climate system will respond, and the reasons behind past abrupt climate changes and potential for future such changes (EPA 2008).

The U.S. Climate Change Science Program (CCSP 2008) is developing twenty-one synthesis and assessment products to advance scientific understanding of these uncertainty areas by the end of 2008. The first product, SAP-1.1 (CCSP 2006), which to date is the only product that has been made final, addresses identified conflicts between observations and simulations of surface and atmospheric temperature trends. The goals of the CCSP include summarizing what is known about climate change, what is uncertain, and what areas should be recommended for further study.

In addition to the current uncertainties discussed above, there are many longer-term natural factors that affect temperature trends both up and down. These include the natural factors that caused the major ice ages, the Medieval Warm Period, and the Little Ice Age. Some natural factors include:

- Longer-term deep-sea ocean circulations
- Volcanic activity
- Variations in the strength and characteristics of solar output
- Orbital variations of the earth

These factors, to the extent that they could be affecting climate trends, create additional uncertainty because it is not clear which of the natural factors are the dominant influences on climate change.

2.10.2.3 Local Climate Change Science

The one aspect of man-made climate change for which there is scientific consensus is the urban heat island (UHI) effect. The UHI effect is the result of thermal energy releases and land use changes in urban areas, as compared to the rural areas surrounding them. Data collected in numerous large cities reveal that summertime high temperatures can be 5-10º F higher in the urban core than in nearby rural areas. Similarly, nighttime low temperatures in urban areas tend to be significantly higher than in surrounding rural areas. The tendency of more densely populated areas to exhibit the UHI effect is illustrated below, which is based on a study done using data from California.

California counties that have developed large populations show significant warming over the last century; counties with intermediate sized populations show a lower amount of warming. Counties that were the least developed showed very little warming, and even in these counties, there is no doubt that some weather stations are affected by nearby modest growth, that may cause a slight upward temperature trend. This study shows that in California, the UHI effect is evident over the 20th century in developed areas, while in more rural areas there has been little increase in temperatures.

2.10.2.4 Proposed Action Effects & Conclusions

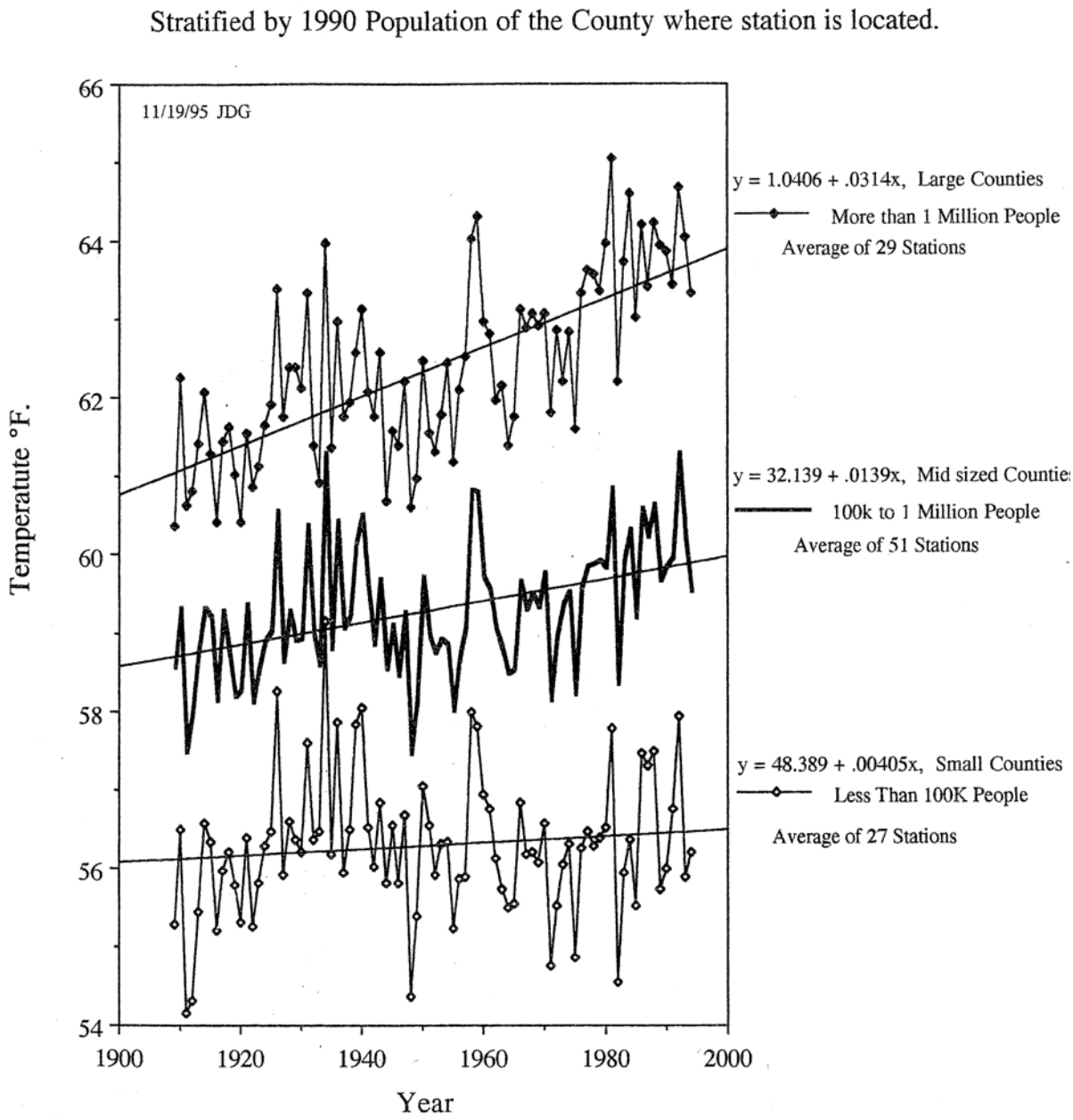
The Proposed Action is expected to add a very small amount of CO_2 emissions to local, regional, national and global emissions of CO_2, in comparison to total anthropogenic emissions. However, if there will be adverse effects on climate because of these emissions, they would be in the context of a cumulative, global-wide effect, as the emitted CO_2 would mix throughout the global atmosphere over the years and decades important for describing climate. SEA acknowledges that even though the emissions from the Proposed Action would have a miniscule effect globally, these cannot be discounted relative to cumulative effects.

If global climate change occurs as a result of anthropogenic GHG emissions, there could be both a variety of effects. The effects could include a rise in sea level as it relates to infrastructure, possible increases in rainfall events causing flooding, summer time heat stress on mammals, and changes in ecosystems that affect plant and animal habitats. The effects could also include less cold-related stress on mammals and the potential for a cumulative, worldwide increase in atmospheric CO_2 concentrations that would enhance crop production for both food and biomass.

To the extent that the Proposed Action has the effect of increasing the efficiency of the CN rail system it would have the potential to reduce the pressure on current rail shippers to make a modal shift from rail to truck. From the energy efficiency and GHG emissions standpoints, transport of goods by rail is far superior to transport by truck, on a per freight-ton-mile basis. See the discussion of energy in the Draft EIS Sections 3.9, 4.8, and 5.6.

Finally, the Proposed Action would have a very small, but cumulative, effect on local climate through the urban heat island (UHI). This would be due to the slight increase (on an urban-wide basis) of fuel usage, and some additional rail infrastructure construction, which would increase very slightly the area of developed land in the metropolitan area (see Figure 2.10.3, below).

Figure 2.10-3. Urban Heat Island Effect in California vs. County Population in 1990



Source: Bulletin of the American Meteorological Society, July 1996

2.11 Noise and Vibration

In response to comments on the Draft EIS, SEA revised the analysis of noise and vibration associated with the Proposed Action, to more completely assess the effects of idling trains, trains rolling through crossovers, wheel flange squeal on sections of curved track, and revised connections associated with the Proposed Action. SEA also revised these assessments at other connections to more completely assess noise and vibration at those locations. As a result, the number of receptors adjacent to the EJ&E that are predicted to experience threshold levels of noise and vibration has changed. Table 2.11-1, below, presents the revised noise analysis results (see also Appendix A).

Table 2.11-1. Revised Assessment of Receptors Exposed to a 3 dBA Increase and an Ldn of 65 dBA

EJ&E Rail Line Segment	Receptors Exposed to a 3 dBA Increase and a 65 dBA Ldn on EJ&E Rail Line		
	Existing Conditions	Future Conditions	Incremental Change from the Proposed Action
1	0	0	0
2	0	590	590
3	29	63	34
4	350	581	231
5	120	353	233
6	148	567	419
7	284	756	472
8	265	523	258
9	227	435	208
10	436	987	551
11	173	358	185
12	5	59	54
13	55	169	114
14	185	883	698
Total	**2,277**	**5,785**	**3,508**
Net Change on the CN Rail Lines (from the Draft EIS)		-2,738	
Total Change in Affected Receptors to CN and EJ&E Rail Lines		3,047	
Increase in Affected Receptors (over Draft EIS)		853	

Data in the table show that the net effect of SEA's revised noise analysis is an increase in the number of noise-sensitive receptors predicted to experience a 3 dBA (decibel above reference noise) increase and an Ldn (day-night noise level) of 65 dBA or greater. Similarly, SEA also revised the assessment of receptors predicted to experience an increase of 5 dBA and an Ldn of 70 dBA. SEA performed this revision to correct errors in the analysis shown in the Draft EIS, and also to reflect other revisions to the noise analysis that SEA performed in support of the Final EIS. Table 2.11-2, below, presents a summary of that assessment.

Table 2.11-2. Revised Assessment of Receptors Exposed to a 5 dBA Increase and an Ldn of 70 dBA		
EJ&E Rail Line Segment	Receptors Exposed to a 5 dBA increase and an Ldn of 70 dBA	
	Draft EIS	Final EIS
4	319	347
5	109	109
6	77	155
7	263	310
12	27	18
13	83	88
14	344	406
Total	**1,222**	**1,433**
Increase in Receptors (from Draft EIS)		211

As shown in the Table 2.11-2, above, the net effect of SEA's revised noise analysis is an increase in the number of noise-sensitive land uses (211 receptors) predicted to experience a 5 dBA increase and an Ldn of 70 dBA. The Applicants have proposed voluntary mitigation, which, SEA concludes, would result in meaningful and appropriate noise reduction.

SEA also revised the vibration analysis to refine the assessment of vibration due to wheels rolling over the gap in the rail at crossovers. The analysis of vibration at crossovers performed for the Draft EIS modeled the crossovers as point sources (with energy radiating equally in all directions), resulting in circular vibration contour lines. However, the precise location of crossovers was not determined in SEA's original analysis. Therefore SEA conservatively created rectangular vibration contours in the vicinity of known crossovers. As a result, the Draft EIS conservatively overstated the number of vibration effects associated with crossovers. For the Final EIS, SEA obtained more refined information about the number and location of crossovers. In the revised assessment, this vibration source was treated as a point source and SEA plotted circular vibration contours using GIS technology. Table 2.11-3, below, presents the results of this revised vibration assessment.

Table 2.11-3. Revised Vibration Analysis Results		
EJ&E Rail Line Segment	Number of Vibration-Sensitive Receptors Predicted to Experience a Vibration Effect as Defined by FTA	
	Draft EIS	Final EIS
1	0	0
2	0	0
3	13	10
4	176	86
5	67	58
6	23	11
7	11	5
8	19	15

Table 2.11-3. Revised Vibration Analysis Results		
EJ&E Rail Line Segment	Number of Vibration-Sensitive Receptors Predicted to Experience a Vibration Effect as Defined by FTA	
	Draft EIS	Final EIS
9	23	0
10	5	5
11	31	10
12	2	0
13	19	0
14	33	13
Total	422	213

Analysis results in the table above show a decrease in the number of potential train-induced ground-borne vibration effects associated with the Proposed Action. This decrease reflects SEA's refinement of the depiction of vibration contours at crossovers. The following sections discuss SEA's additional noise analysis.

2.11.1 Noise from Idling Trains

SEA revised the analysis of noise from idling trains in the EJ&E corridor to reflect revised assumptions regarding the number and duration of idling trains. The analysis assessed noise from stationary locomotives idling on a siding, noise from trains traveling over the crossover to enter a siding, and combined these with the wayside noise from trains on the main line. These analyses are based on Federal Transit Administration (FTA) methods.

SEA assumed that the total daily duration that a siding is occupied by idling trains is 12 hours; this may be from any number of trains temporarily idling on a siding. SEA's analysis assumed that each train has two idling locomotives – the noise sources. Assuming an even mix of northbound trains and southbound trains, the net locomotive idling time is 6 hours per day at one end of the siding, and six hours per day at the other end of the siding. Under these assumptions, the highest concentration of noise is located at the furthest ends of the sidings, where locomotives park. SEA used the same noise contour distance for the entire length of the siding as a conservative overestimate of noise from locomotives idling on sidings in the project area.

In addition to noise from idling locomotives, SEA assessed noise from trains traveling over crossovers at the entrance and exit of each siding. The analysis produced a circular noise contour because crossovers were modeled as point sources where noise emissions travel equally in all directions. To analyze of noise from crossovers and connections, SEA used segment-specific traffic data that was provided by CN. As a final measure of conservatism in the additional noise modeling, SEA combined noise from idling locomotives, crossovers, and wayside noise associated with trains on the main line. The combined noise levels were then used to calculate the distance to the 65 and 70 dBA Ldn contours. These refinements resulted in an increase in the number of noise-sensitive receptors exposed to threshold levels of noise associated with the Proposed Action. The receptors shown in Tables 2.11-1 and 2.11-2, above, include these additional receptors. Noise contours shown in Appendix A of this Final EIS present the results of this analysis.

2.11.2 Wheel Flange Squeal

The Draft EIS contained a limited assessment of noise associated with wheel squeal on segments of curved track. Based on the comments received on the Draft EIS, SEA determined that additional analysis of wheel squeal was necessary. The following discussion presents SEA's revised analysis of wheel squeal.

2.11.2.1 Introduction

Wheel squeal occurs "when a steel-wheel tread or its flange rubs across the rail, setting up resonant vibrations in the wheel which cause it to radiate a screeching sound" (FTA 2006). It is a common occurrence. More specific sources of squeal are dependent on numerous environmental and train-specific factors. Train speed, length, and train wheel base are considered in a detailed evaluation and assessment of wheel squeal. The latest research suggests that the most prevalent cause of wheel squeal is friction between the truck wheel base and a curved track. All sources cited refer to the primary cause of wheel squeal as being lateral creep, which takes place along curved tracks.

2.11.2.2 Assessing Wheel Squeal

There are several contrasting views as to when and where wheel squeal should be evaluated, as listed below. The general consensus is that lateral creep, the primary cause of wheel squeal, is caused by interaction between the rail on a curve and the wheel base of a truck. The likelihood of wheel squeal can then be determined by a ratio of R/W (R being the radius of the curve and W being wheel base). Most texts refer to a ratio of over 100 as sufficient in eliminating wheel squeal without mitigation.

Wheel base research suggests that curve squeal be examined for all curves with a radius of less than 500 m. This is a conservative approach as many texts suggest wheel squeal occurs at curves with a radius of 300 m or less.

SEA performed a limited literature review to identify a suitable threshold for determining where wheel squeal could potentially occur and, therefore, where it should be evaluated. Table 2.11-4, below, summarizes SEA's literature review.

Table 2.11-4. Summary of Wheel Squeal Assessment Thresholds

Reference Source	Parameters for Wheel Squeal Sssessment
Transit Noise and Vibration Effect Assessment[1]	Not addressed
Handbook of Acoustical Measurement and Noise Control [2]	Under a 100 m (328ft) radius
"Wheel/Rail Noise Control Manual" [3]	Approximately 600 m (2000 ft) R/W ratio of 50-100 and below
N. Vincent. "Curve squeal of urban rolling stock - Part 1: State of the art and field measurements" [4]	500 m (1640 ft) R/W ratio of 100 and below

Sources:
1 FTA 2006
2 Harris 1998
3 TCRP Report 23
4 Vincent 2006

FTA does not address a radius threshold at which wheel squeal should be analyzed. However, there is common acceptance among freight rail engineers that tracks with a radius greater than 7 degrees may produce wheel squeal. SEA conservatively assumed that the threshold for potential wheel squeal is a track curve radii of 3 degrees. Based on this conservative assumption, SEA revised the analysis of

noise associated with wheel squeal in the project area. Numerous locations along the EJ&E corridor, including revised connections at Leithton and Matteson, met the three-degree criterion, and were assessed in this analysis. These refinements resulted in an increase in the number of noise-sensitive receptors exposed to threshold levels of noise associated with the Proposed Action. The receptors shown in Tables 2.11-1 and 2.11-2, above, include these additional receptors. Noise contours shown in Appendix A.7 of the Final EIS present the results of this analysis. SEA notes that the Applicants have proposed voluntary mitigation, discussed in Chapter 4 of this Final EIS, which SEA believes would result in meaningful and appropriate reduction in wheel squeal.

2.11.3 Ivanhoe and Munger Connections

Appendix L (Noise and Vibration Analysis) of the Draft EIS presented noise and vibration contours overlaid on aerial photographs. The contours shown at the Ivanhoe and Munger connections were incomplete. For the Final EIS, SEA revised the noise contours by assessing noise from crossovers, wheel squeal, and wayside noise for both the Ivanhoe and Munger connections. Appendix A of this Final EIS presents the 65 and 70 dBA Ldn contours for these two locations. Appendix A of this Final EIS also presents the vibration contours.

2.11.4 Noise and Vibration at Crossovers

Appendix L (Noise and Vibration Analysis) of the Draft EIS presented noise and vibration contours overlaid on aerial photographs. The noise and vibration analysis performed for the Draft EIS did not account for all crossovers associated with the Proposed Action. Revised noise and vibration contours do account for all crossovers associated with the Proposed Action. These refinements resulted in an increase in the number of noise-sensitive receptors exposed to threshold levels of noise associated with the Proposed Action. The receptors shown in Tables 2.11-1, 2.11-2 and 2.11-3, above, include these additional receptors. Appendix A of this Final EIS presents final noise and vibration contours.

2.11.5 Noise and Vibration at Historic Structures

FTA guidance (FTA 2006) indicates it is extremely rare for ground-borne vibration from train operations to cause building damage, including minor cosmetic damage. Damage from vibration is unlikely to occur except when the track alignment is very close to the structure. The criteria level for minor structural damage (possible cracks in plaster walls) is 100 VdB (velocity decibels) for fragile buildings. For fragile historic buildings the criteria level for minor structural damage is 95 VdB (see Table 4.8-1 in the FTA guidance).

STB conducted supplemental analysis of the potential for predicted ground-borne vibration levels to effect historic structures. The 94VdB contour lines (the closest available contour modeled) are located 10 feet from the centerline of the closest tracks for the entire EJ&E corridor, except for the segments listed in Table 2.11-5, below. All the segments listed below have special track work and are located between Bishop Ford Freeway in Dyer, Indiana, and Main Street in Griffith, Indiana. The 94VdB contours for the segments listed in Table 2.11-5 are located at 50 feet from the centerline of the closest tracks.

Table 2.11-5. Predicted 94 VdB Vibration Contours for EJ&E Segments				
City	EJ&E Segment	Mile Post	Closest Arterial Rd.	Contour Distance (ft)
Griffith, IN	4	36.19E	Broad Street	50
Griffith, IN	5	35.75E	Broad Street	50
Schererville, IN	5	34.95E	Kennedy Avenue	50
Schererville, IN	5	34.40E	Kennedy Avenue	50
Schererville, IN	5	33.80E	Kennedy Avenue	50
Dyer, IN	5	31.30E	Lake Street	50

The Barrington Historic District boundary most closely approaches the EJ&E railroad track at its northwest corner. However, the centerline of the nearest track is approximately 300 feet from the district boundary. Therefore, SEA concludes that the Proposed Action would not result in vibration levels that pose a hazard to fragile historic structures in Barrington.

2.11.6 Noise Mitigation Analysis

SEA performed an assessment of noise mitigation cost-effectiveness using criteria that Illinois DOT and Indiana DOT use to assess highway noise mitigation measures. SEA evaluated over 90 locations to determine if cost-effective noise barriers could potentially be constructed in areas adjacent to the EJ&E. Appendix A of this Final EIS presents the results of SEA's assessment. Figures in Appendix A.8 show the locations where noise mitigation measures were evaluated. Through this Final EIS, the areas where noise mitigation measures have been determined to be cost-effective by SEA and should be given priority consideration by the Applicants as they execute their voluntary noise mitigation measures.

2.12 Biological Resources

In response to the U.S. Department of Interior Fish and Wildlife Service's (USFWS) comments dated September 29, 2008, SEA undertook additional analysis for the federally listed Hine's emerald dragonfly (*Somatochlora hineana*), the Karner blue butterfly (*Lycaedies melissa samuelis*), the Eastern prairie fringed orchid/Prairie white fringed orchid (*Platanthera leucophaea*), and the Indiana bat (*Myotis sodalis*). A biological report documents the results of this analysis, and is found in Appendix A of this Final EIS. Responses to issues raised by the USFWS are addressed in Chapter 3 of this Final EIS.

As part of the additional analysis for biological resources, SEA undertook species research, field investigations, resource agency coordination, and preparation of a biological report. On October 23, 2008, SEA conducted a meeting with Illinois and Indiana USFWS personnel to discuss issues pertaining to the threatened and endangered Federal and state species, turtle crossings, and the effect of noise on migratory species. Through extensive coordination with USFWS, SEA has made the following determinations with regard to potential effects on threatened and endangered species as a result of the Proposed Action and Transaction-related constructions.

2.12.1 Hine's Emerald Dragonfly (HED)

Since there are no changes in rail operations on the Paul Ales Branch or on the CN Joliet subdivision where the most suitable habitat exists for the HED, SEA determined that the Proposed Action and construction of the Joliet connection may affect, but would not adversely affect, the HED or its habitat. There is no presence of breeding, foraging, or larval habitat at the proposed Joliet rail connection, and, trains will be required to slow down to 10 mph to cross over the existing Des Plaines River EJ&E railroad bridge in Segment 9B on the EJ&E rail line. Since there is no change in operations on the Paul Ales Branch and the Joliet subdivision, and there would be reduced train speeds in Segment 9B, SEA determined the Proposed Action would not adversely affect the HED along the EJ&E rail line.

2.12.2 Karner Blue Butterfly

As a result of additional investigations and coordination, SEA determined that the Proposed Action may affect, but it is not likely to adversely affect, the habitat of the Karner blue butterfly.

2.12.3 Eastern Prairie Fringed Orchid

Eastern prairie fringed orchid/Prairie white fringed orchid. As part of the field studies conducted for the orchid, SEA's biological resources team identified potentially suitable habitat, such as wetland fringe or mesic prairie areas, that may be present at the proposed rail connections (Matteson and Munger) and double track locations. SEA determined that the Proposed Action would not affect the orchid in Indiana. On November 5, 2008, the biological resources team met with representatives of the Illinois USFWS to conduct a field visit to determine if potentially suitable habitat for the orchid occurred within Transaction-related construction areas. In addition, SEA developed a mitigation measure stating that, should the Proposed Action be approved, no construction would occur until after protocol surveys for the orchid are complete. If orchids are found, consultation would be re-initiated.

2.12.4 Indiana Bat

SEA determined that the Proposed Action and transaction-related constructions may affect, but would not likely adversely affect, the Indiana bat or its habitat. SEA has included a mitigation measure in Chapter 4 of this Final EIS with regard to Indiana bat habitat—no trees that provide suitable habitat will be removed for rail construction purposes between April 15th and September 15th.

The Biological Report, contained in Appendix A of this Final EIS, presents data and information gathered during the period SEA performed additional analysis.

2.13 Cumulative Effects of Rail/Rail At-Grade Crossings on Highway/Rail At-Grade Crossings

As described in Chapter 5 of this Final EIS, SEA hosted a number of stakeholder and public meetings during the Draft EIS comment period. At these meetings, public participants and agency representatives questioned cumulative effects of additional traffic on rail/rail at-grade crossings on the EJ&E rail line. Commenters contended that the Draft EIS underestimated effects on environmental effect categories including vehicle delays, noise and vibration, and emergency services because the analysis did not include the effects of the Proposed Action on rail/rail at-grade crossings and nearby highway/rail crossings. Some communities also commented that cumulative effects could result from the combination of existing trains on other railroad lines with those proposed by CN on the EJ&E rail line.

In response, SEA reviewed the locations where other railroads intersect or run parallel to the EJ&E rail line to determine whether cumulative effects would likely occur. SEA's analysis includes its best estimate of the number of trains operating on the intersecting rail lines. However, SEA notes that most of the intersecting rail lines are owned and operated by entities that are not parties to the Proposed Action before the Board. The train numbers, train speeds, and train lengths are all subject to change based on the business needs of the operating railroad. Table 2.13-1, below, summarizes SEA's analysis of possible cumulative effects, including noise and vibration, vehicle delay, and emergency services effects at locations affected by rail/rail at-grade crossings.

Table 2.13-1. Cumulative Effects of Intersecting Railroads

Location	Railroad Crossed by the EJ&E	Type of Crossing	2015 EJ&E, Diverted CN, and Other[a] Trains/day on EJ&E Rail Line with the Proposed Action	Additional Railroad Traffic (Trains/day) on Intersecting Rail Lines	Potential Cumulative Effects
Illinois					
Barrington	UP	At-Grade	20.3 CN/EJ&E	56 Metra, 7 UP (additional Metra trains could be possible with UP Northwest expansion)	Increased number of vehicle delays on Hough Street (IL.59) and Main Street/Lake Cook Road during peak travel periods when Metra trains are most frequent; increased noise & vibration; increased effect on emergency services during peak travel periods. Since railroads intersect at grade, effects of both not likely to occur concurrently.
Spaulding Road (Bartlett)	CP/IC&E	At-Grade	20.3 CN/EJ&E (52 additional Metra trains could be possible with STAR Line)	50 Metra 31 CP/IC&E	Increased number of vehicle delays on Spaulding Road; increased noise & vibration; increased effect on emergency services. Since railroads intersect at grade, effects of both not likely to occur concurrently.

Table 2.13-1. Cumulative Effects of Intersecting Railroads					
Location	**Railroad Crossed by the EJ&E**	**Type of Crossing**	**2015 EJ&E, Diverted CN, and Other[a] Trains/day on EJ&E Rail Line with the Proposed Action**	**Additional Railroad Traffic (Trains/day) on Intersecting Rail Lines**	**Potential Cumulative Effects**
Hawthorn Lane (West Chicago)	UP	Parallel and Adjacent	23.4 CN/EJ&E (52 additional Metra trains could be possible with STAR Line)	6 UP	Increased delay on Hawthorn Lane from CN/EJ&E trains waiting for UP freight trains to cross at West Chicago Road; increased noise & vibration; increased effect on emergency services in West Chicago & Wayne.
Washington Street (West Chicago)	UP	At-Grade	31.6 CN/EJ&E (52 additional Metra trains could be possible on flyover with STAR Line)	52 Metra 51 UP (additional Metra trains could be possible with UP West Expansion)	Increased number of vehicle delays at Washington Street; increased noise & vibration.
Eola (Aurora)	BNSF	Grade Separated	39.5 CN/EJ&E (52 additional Metra trains could be possible with STAR Line)	72 Metra 6 Amtrak 67 BNSF	Increased noise & vibration
Rock Island Jct. (Joliet)	Metra/CSX/AIS	At-Grade	28.3 CN/EJ&E	47 Metra 10 CSX/IAIS	Increased noise & vibration
New Lenox	NS	Grade Separated	28.3 CN/EJ&E	4 Metra 2 NS	Increased noise & vibration
Chicago Heights	CSX/UP	At-Grade	31.6 CN/EJ&E	53 CSX/UP (up to 24 more Metra trains could be possible with Southeast Service)	Increased noise & vibration
Indiana					
Dyer	CSX/ Amtrak	At-Grade	34.2 CN/EJ&E	2 Amtrak 2 CSX (18 additional NICTD trains could be possible with West Lake service to Lowell)	Increased noise &vibration
Hartsdale (Schererville)	NS	At-Grade	34.2 CN/EJ&E	2 NS	Increased noise & vibration

Table 2.13-1. Cumulative Effects of Intersecting Railroads					
Location	RailroadCrossed by the EJ&E	Type of Crossing	2015 EJ&E, Diverted CN, and Other[a] Trains/day on EJ&E Rail Line with the Proposed Action	Additional Railroad Traffic (Trains/day) on Intersecting Rail Lines	Potential Cumulative Effects
Griffith[b]	CN	At-Grade	28.6 CN/EJ&E	2.9 CN west of crossing, 4.6 CN east of crossing (18 additional NICTD trains could be possible on flyover with West Lake Service to Valparaiso)	Increased noise & vibration from NICTD trains
Van Loon (Gary)	NS	At-Grade	28.6 CN/EJ&E	23 NS	Increased noise & vibration
Ivanhoe (Gary)	IHB/ CSX	At-Grade	29.8 CN/EJ&E	2 IHB/CSX	Increased noise & vibration

Notes:

[a] Other train traffic could be the result of BNSF, CSX, UP, Norfolk Southern, etc., trackage rights on EJ&E lines.

[b] See Sections 2.5 and 2.10 for discussion of effects of CN trains on vehicle delay and noise.

SEA discussed the cumulative effects of Metra's proposed STAR Line and Southeast Service in Chapter 5 of the Draft EIS and Section 2.3 of the Final EIS. Cumulative effects of the Proposed Action on Metra Northwest, UP West, and the proposed NICTD extension are discussed in Sections 4.1.7 and 5.4.2 of the Draft EIS.

SEA notes that the Applicants have included a voluntary mitigation measure, VM 38, whereby the Applicants commit to operate the key interlockings (rail/rail at-grade crossings) at West Chicago and Barrington, Illinois, in accordance with the current agreements governing EJ&E operations. The agreements generally give priority to the Metra commuter trains. SEA reviewed these agreements and notes that the agreements would potentially limit the operations of EJ&E trains at the rail/rail at-grade crossings during the peak period of Metra train operations. SEA believes that the voluntary mitigation measure, if imposed and implemented, would have the effect of reducing the likelihood of some of the potential cumulative effects identified in Table 2.13-1, above.

2.13.1 Effects of Additional Programmed Highway Projects

Section 5.5.3 of the Draft EIS examined potential cumulative effects of planned highway construction projects. However, agency representatives at the stakeholder meetings commented that the analysis in the Draft EIS omitted certain planned county road projects that would cross the EJ&E rail line where the Applicants propose an increase of at least eight trains per day under the Proposed Action. These projects were not included in the Draft EIS because they were not included in the *Proposed Highway Improvement Program* (IDOT 2008) for Northeastern Illinois. In response to this comment, SEA reviewed published transportation construction plans for the respective counties and found two

projects that cross the EJ&E rail line where the Applicants propose to increase train numbers—Penny Road in Barrington Hills, Illinois, and Harlem Avenue in Frankfort, Illinois (Cook County 2007). Information on these projects is provided below.

2.13.1.1 Penny Road - Barrington Hills

Cook County plans to improve Penny Road from the Cook/Kane county line in Barrington Hills to Illinois 59. Penny Road crosses the EJ&E rail line at-grade just west of IL 59. The Cook County Department of Highways explained in a telephone conversation that the crossing would be widened to accommodate a new left-turn lane on Penny Road at IL 59 (R. Bettenhausen, pers. comm., September 30, 2008). Cook County would retain the existing warning system of flashing lights and gates. Staff from the ICC, an Illinois state agency that regulates safety at all public railroad crossings, confirmed Cook County's information in a meeting with SEA on October 8, 2008. The addition of a left-turn lane should create additional storage capacity which will reduce the possibility for cars to wait on the EJ&E tracks. As a result, SEA does not believe there would be cumulative effects from this road improvement project.

2.13.1.2 Harlem Avenue - Frankfort

Cook County plans to reconstruct Harlem Avenue from US 30 on the north, across the EJ&E rail line, to south of Sauk Trail. The project would add two travel lanes to make Harlem Avenue a four-lane road with a median. Cook County explained that the plans are 20 percent complete and details are not available as to whether the existing warning system of flashing lights with gates would be retained or improved (R. Bettenhausen, pers. comm., September 30, 2008). SEA believes there could be beneficial cumulative effects on safety from warning system improvements, and vehicle delay from reduced queue length because of additional travel lanes, depending on the final design of this improvement.

2.13.2 Effects of Actions of the Illinois Commerce Commission

Before a new highway/rail at-grade crossing can be added or an existing highway/rail at-grade crossing can be altered, the ICC must review the proposal and approve it. In discussions with ICC staff, SEA identified the following ICC actions that could have cumulative effects.

2.13.2.1 Gifford Road - Bartlett and Elgin

In November 2004, the EJ&E Railway Company petitioned the ICC for authorization to create a new at-grade crossing where an industrial side track was proposed for service to a new asphalt plant. The side track was proposed to run from the EJ&E rail line just south of Spaulding Road westerly along the CP/Metra Milwaukee District West Line to the new asphalt plant and other industrial customers. In order to reach the new plant, the side track would need to cross Gifford Road, a road under the jurisdiction of the Cook County Highway Department that runs north and south approximately 0.5 mile west of the EJ&E rail line. In April 2005, the ICC approved EJ&E's petition for the new at-grade crossing on Gifford Road at a point only 210 feet south of the CP/Metra Milwaukee District Line. The ICC heard evidence that: 1) EJ&E planned to serve the new asphalt plant between 9 p.m. and 5 a.m.; 2) EJ&E would erect advance warning signs along Gifford Road, and 3) EJ&E would retain level shoulder areas along Gifford Road so that vehicles caught between the two crossings would have an escape area. ICC staff advised SEA that if circumstances change, EJ&E could be required to interconnect the warning system at the new Gifford Road crossing with the Metra warning system. As explained in the Draft EIS, the Proposed Action would not cause vehicle safety and delay effects at the highway/rail at-grade crossing at Gifford Road (see Section 4.2. and Section 4.3.1 of the Draft EIS). As a result, the ICC-approved highway/rail at-grade crossing of Gifford Road should not result in cumulative effects.

2.13.2.2 116th Avenue - Frankfort and Mokena

In May 2008, the Villages of Frankfort and Mokena, Illinois, petitioned the ICC to modify the roadway at the 116th Avenue crossing on the EJ&E rail line. The Villages proposed modifications including a median barrier in the center of the roadway, a sidewalk on one side of the roadway and a multi-use trail on the other side. The Villages would upgrade the current warning system of flashing lights by adding gates at the 116th Avenue crossing, the sidewalk, and the trail. The ICC has not yet approved the petition, but ICC staff indicated in a conversation with SEA on October 8, 2008, that approval is expected shortly after negotiations are complete. When these improvements have been approved and constructed, there should be a beneficial cumulative effect on safety.

2.13.3 Sauk Village

In February 2008, the developer of an industrial park, Sauk Village, Illinois and Cook and Will counties petitioned the ICC for authorization to create four new at-grade crossings over Jason Rasmussen Drive, a public road under the jurisdiction of Sauk Village. The industrial park is served by EJ&E, and because it is expanding, Jason Rasmussen Drive would be extended across the industrial park lead track that EJ&E uses to serve the park's tenants. Currently, EJ&E averages six train deliveries per week between 7 p.m. and 11 p.m. When the industrial park expansion is completed, train movements could increase to 24 train movements per week during the same hours, meaning any disruptions on the EJ&E rail line would be minimal.

In August 2008, the ICC approved the petitioners request and ordered the installation of reflecting crossbucks, yield signs, and pavement markings. ICC advised that signage should be placed on the roadway and on a sidewalk that would be extended over the at-grade crossings. Whenever EJ&E moves rail cars through an at-grade crossing, a person on the ground would advise when traffic conditions allow safe movement through the at-grade crossing. Based on this information, SEA concludes that the new at-grade crossing could result in cumulative effects on safety and vehicle delay, but that the safety and traffic precautions being undertaken would minimize any such effects.

2.14 Corrections to the Draft EIS

Section 2.14 presents information that has been corrected or updated since publication of the Draft EIS. Each chapter, page, paragraph and sentence, table, or Appendix in the Draft EIS that is being updated is identified prior to the change shown. In each case, SEA denotes words that are added with an underline and words that are deleted by ~~strikethrough~~. Partial tables reprinted in this chapter reflect only those pages where information or values changed. The remainder of such tables remains as published in the Draft EIS. SEA changed and corrected data originally published in Appendices to the Draft EIS and these updates can be found in Appendix A-11 of this Final EIS. This chapter incorporates, by reference, the Draft EIS into the Final EIS, as updated, revised, and corrected.

2.14.1 Corrections to the Draft EIS

The Board's Section of Environmental Analysis (SEA) prepared the Draft EIS, which it published for public comment and review on July 25, 2008. On July 30, 2008, SEA sent out a postcard to all contacts on the project mailing list notifying them of the incorrect dates for the public meetings that were inadvertently published in Table ES-3 in the Executive Summary of the Draft EIS. A corrected Table ES-3 is presented in Section 2.4, below.

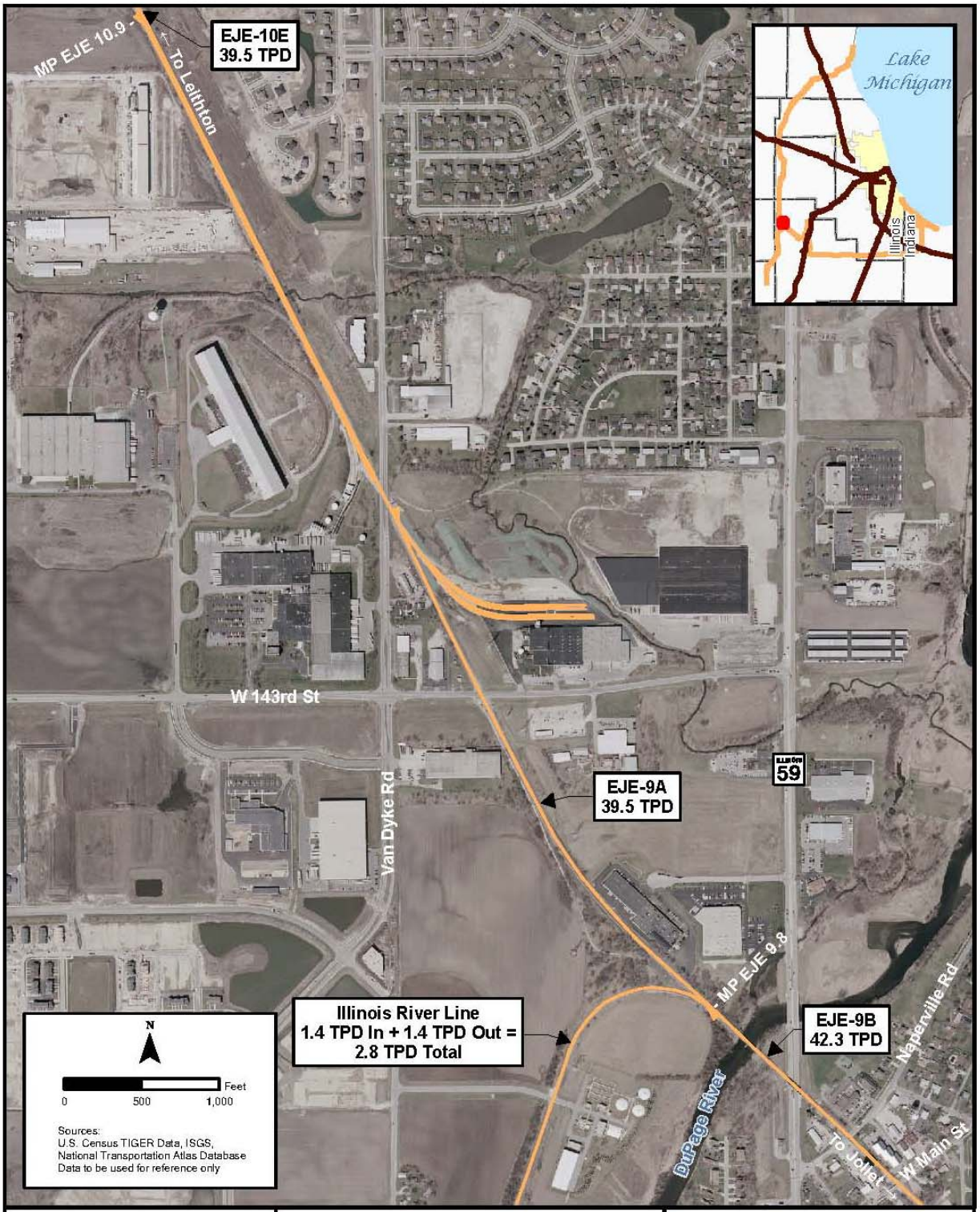
The Applicants filed a letter on May 21, 2008, that revised rail traffic data before and after implementation of the Proposed Action on the CN rail lines outside of the EJ&E arc. The Draft EIS reported that there would be no change to the number of trains on the CN rail lines outside of the EJ&E arc. The changes were quite minor and the corresponding values published in the Draft EIS are more conservative. This Chapter updates the rail traffic data reported in the Draft EIS to reflect the Applicants' revised data from the May 21 filing.

On August 5, 2008, the Applicants filed a letter with the Board that identified incorrect data reported in Exhibit A of the March 12, 2008, response to SEA's information request and the subsequent Draft EIS (see the August 5 filing in Appendix B). SEA conducted independent analysis of the new data – results are reported in Sections 2.5, 2. 6, and 2.11, above. In general, the corrections noted by the Applicants in their August 5, 2008, letter stem from imprecise use of rail line mile markers for estimating the location of highway/rail at-grade crossings, and from the complex operations through certain connections. SEA found that the scale of the transaction mile markers are very useful in identifying specific segments and train traffic. However, five specific highway/rail at-grade crossings near the end of certain segments were incorrectly assigned to the wrong segment, based on the use of the mile markers.

At two of the crossings, there will actually be fewer trains per day than was stated in the Draft EIS (143rd Street and Van Dyke Road, near Plainfield, Illinois). Three crossings will have slightly more trains per day (Main Street in Matteson and East End Ave. in Chicago Heights, Illinois, and Broad Street in Griffith, Indiana) than was noted in the Draft EIS. See Figures 2.14-1 through 2.14-4, below, for further detail on the proposed train numbers at rail crossings in Walker/Plainfield, Matteson, Chicago Heights, Illinois, and Griffith, Indiana, respectively.

CN, in their effort to clarify rail traffic moving on the Joliet Subdivision, submitted a response to SEA on October 31, 2008, that described the pre- Trains Per Day (TPD) number on CN Segments 16, 17 and 18 to be 2.0 TPD, instead of the 1.8 TPD, as shown in the Draft EIS. The marginal difference equates to a revision between 2006 and 2007 traffic levels for a BNSF trackage rights train that operated on CN's Joliet Sub between Glenn Yard and Joliet over these three segments. The 0.2 TPD increase simply reflected the fact that, in 2007, BNSF operated this train 14 times each week instead of 12.5 trains weekly, as occurred during the 2006 and earlier time period. According to the Applicants, this BNSF trackage rights train would be interchanged at Eola under the Proposed Action, and would operate along the EJ&E line to Joliet. This anticipated train volume was included in the Applicant's TPD totals as described in Table 2-2 in the Draft EIS. Therefore, there is no change in train traffic per day on the Joliet subdivision.

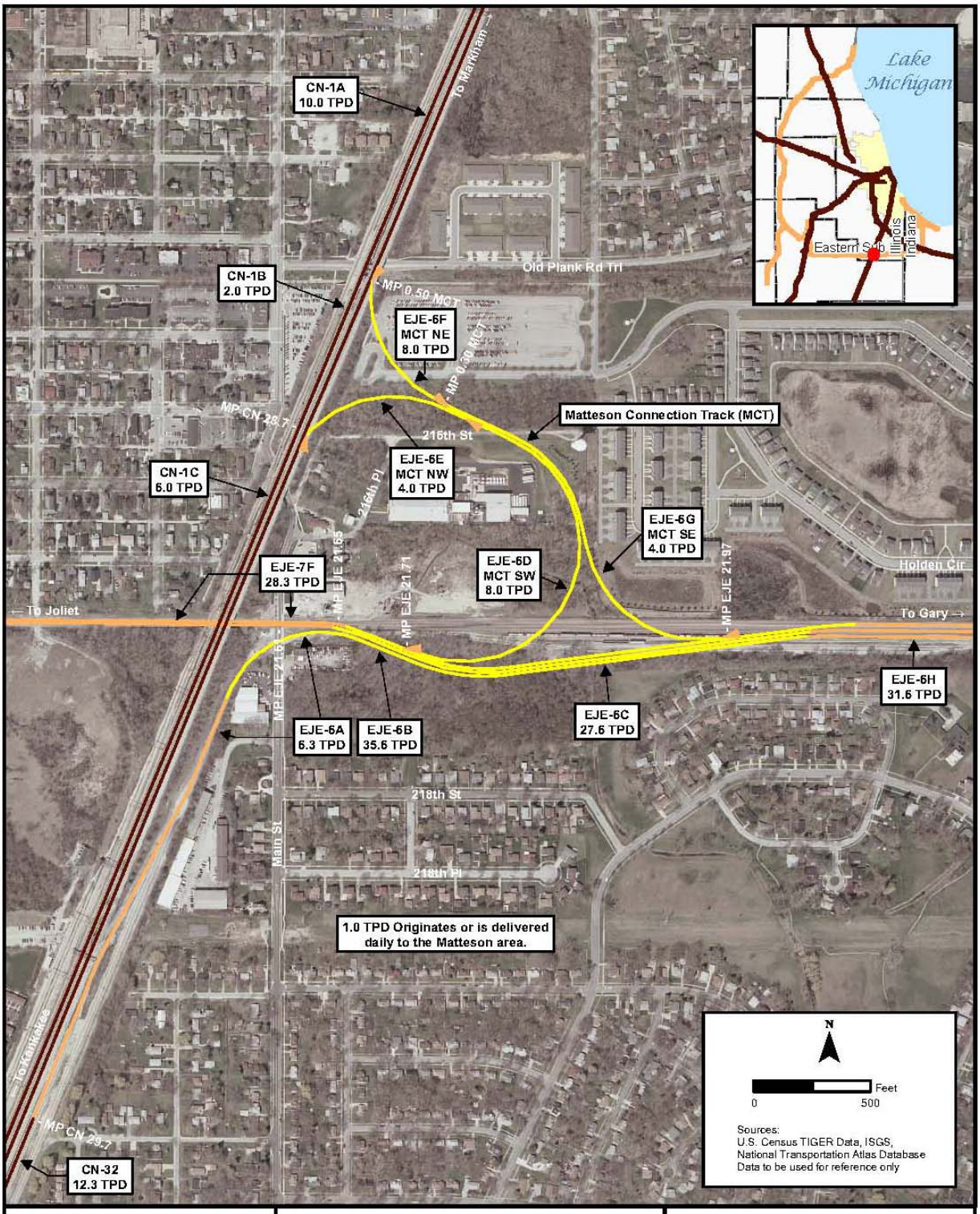
This train would be then replaced by 2.0 TPD being operated by CN between East Joliet Yard and Glenn Yard over CN Segments 16, 17 and 18. These trains would connect with the Joliet Sub using the proposed connection to be constructed near State Street just east of the Des Plaines River bridge.



CN | EJ&E
Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Switch
TPD = Trains per Day

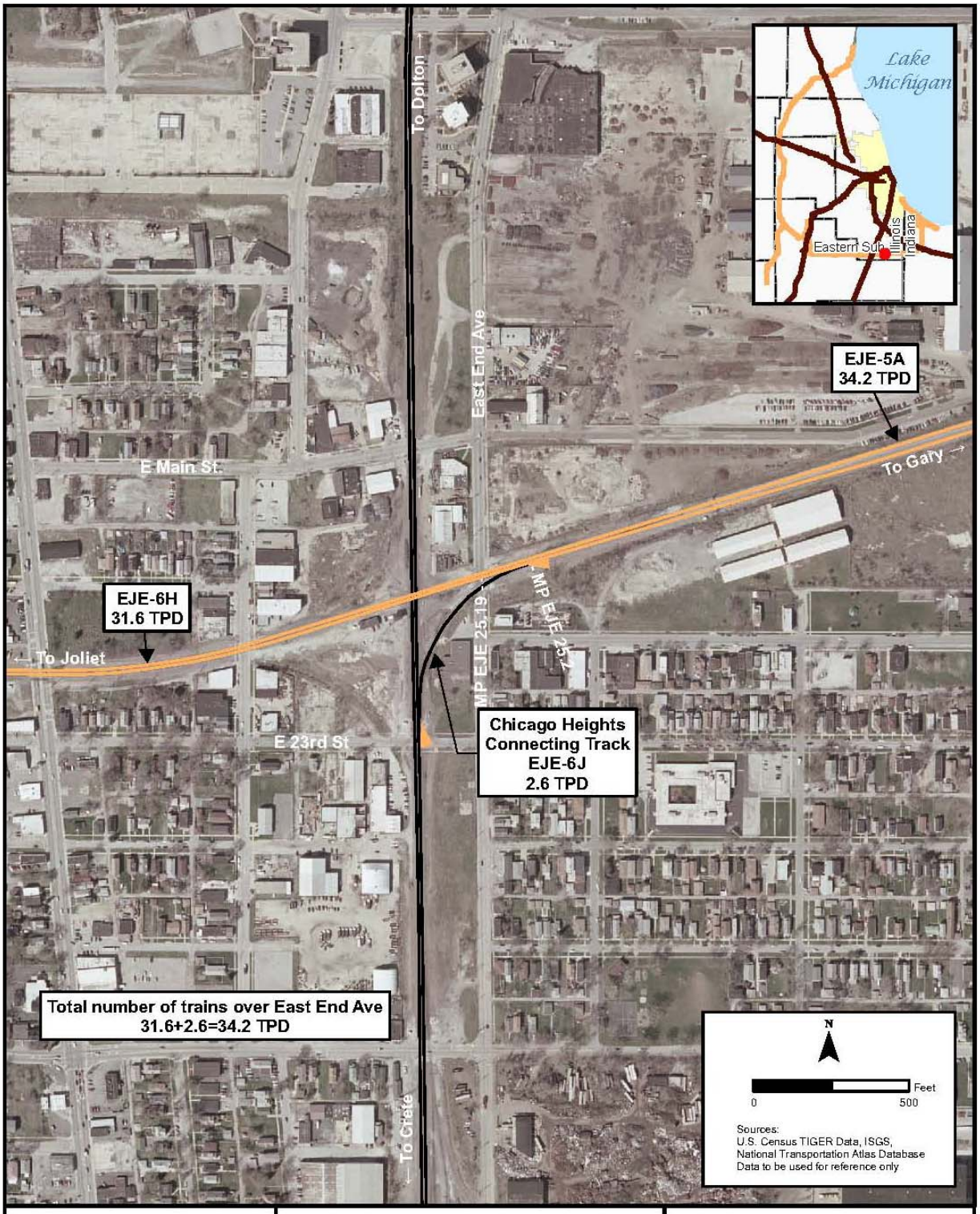
Figure 2.14-1
Revised Estimated Trains per Day - Walker/Plainfield



CN | EJ&E
Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Switch
Proposed Track
TPD = Trains per Day

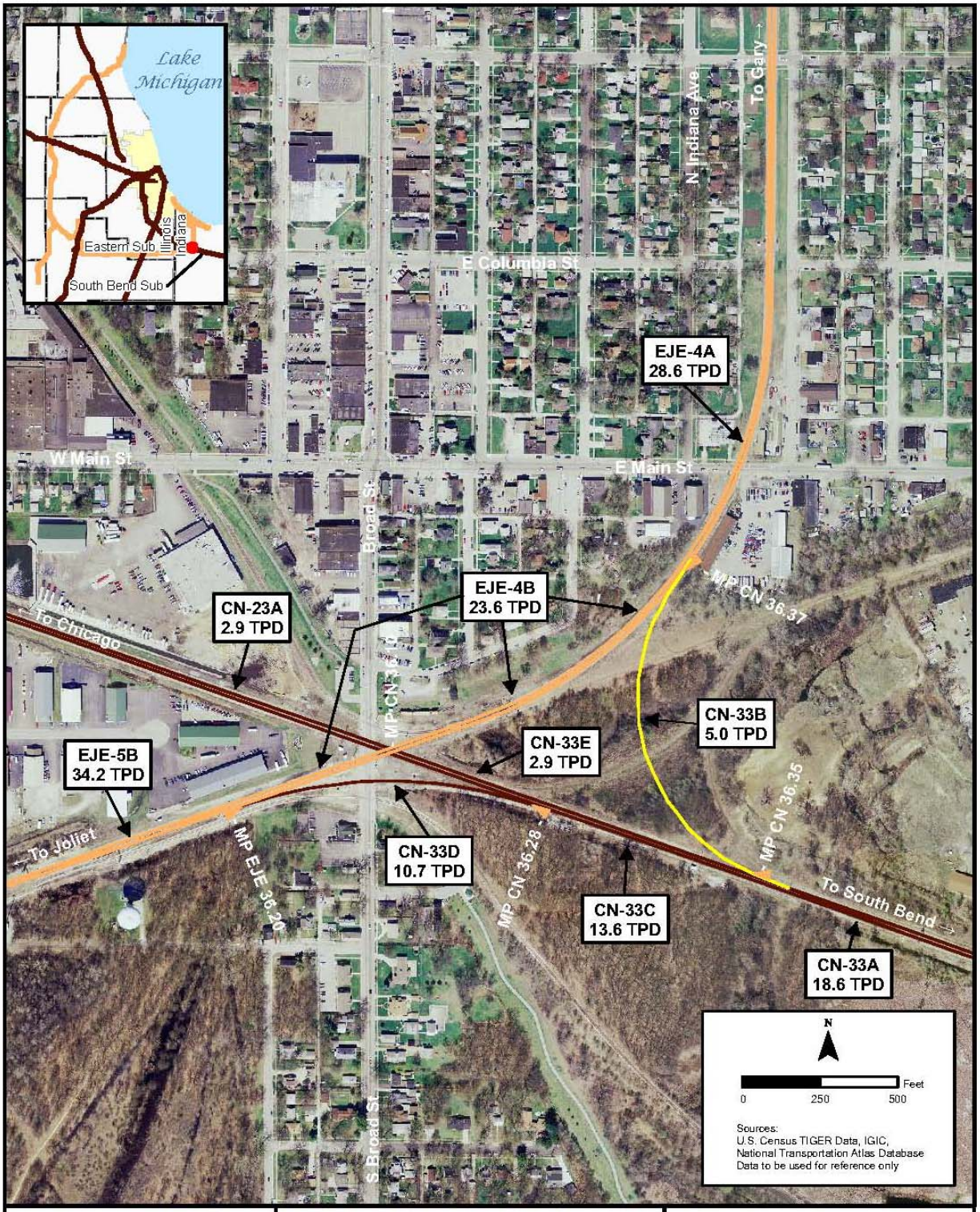
Figure 2.14-2
Revised Estimated Trains per Day - Matteson



CN | EJ&E
Environmental Impact Statement

EJ&E Rail Line
UP Rail Line
Switch
TPD = Trains per Day

Figure 2.14-3
Revised Estimated Trains per Day - Chicago Heights



CN | EJ&E
Environmental Impact Statement

EJ&E Rail Line
CN Rail Line
Switch
Proposed Track
TPD = Trains per Day

Figure 2.14-4
Revised Estimated Trains per Day - Griffith

2.14.2 Dear Reader Letter of the Draft EIS

Page 2, second paragraph, third sentence:

SEA has also distributed the Draft EIS to all parties of record (official participants), as well as making additional print copies of the Draft EIS available for review in ~~49~~ 51 libraries and one village hall throughout the Study Area.

2.14.3 Fact Sheet of the Draft EIS

OPEN HOUSE/PUBLIC MEETINGS ON DRAFT EIS		
Date	**Location**	**Address**
Monday, August 25	Matteson, Illinois Holiday Inn Hotel & Conference Center	500 Holiday Plaza Drive Matteson, IL 60443
Tuesday, August 26	Mundelein, Illinois Crowne Plaza Chicago North Shore	510 E. Route 83 Mundelein, IL 60060
Wednesday, August 27	Barrington, Illinois Barrington High School	616 W. Main Street Barrington, IL 60010
Thursday, August 28	Bartlett, Illinois Bartlett High School	701 W. Schick Road Bartlett, IL 60103
Monday, Sept. 8	Chicago, Illinois Loyola University of Chicago Rubloff Auditorium	25 East Pearson Street Chicago, IL 60611
Tuesday, Sept. 9	Aurora, Illinois West Aurora High School	1201 W. New York Street Aurora, IL 60506
Wednesday, Sept. 10	Gary, Indiana Indiana University Northwest Savannah Center	3400 Broadway Gary, IN 46408
Thursday, Sept. 11	Joliet, Illinois Holiday Inn Hotel & Conference Center	411 S. Larkin Avenue Joliet, IL ~~60435~~ 60436

2.14.4 Executive Summary of the Draft EIS

Page ES-12, seventh paragraph:

SEA also calculated the risk of accidents at public highway/rail at-grade crossings. Under the No-Action Alternative (current conditions), the SEA analysis predicted ~~4.47~~ 4.40 accidents annually on the EJ&E rail line and ~~6.26~~ 6.29 on the CN rail line, with three CN and one EJ&E highway/rail at-grade crossings having a high accident frequency (one accident every 7 years). Under the Proposed Action, the SEA analysis predicted an increase of ~~from 1.57 to 6.04~~ 1.62 (to 6.03) highway/rail accidents annually on the EJ&E rail line and a decrease of ~~from 2.47 to 3.79~~ 2.52 (to 3.77) on the CN rail line, with four EJ&E highway/rail at-grade crossings and no CN highway/rail at-grade crossings having a high accident frequency (one accident every 7 years). Overall, highway/rail at-grade crossing accidents would decrease by 8% (from 10.70 to 9.80) under the Proposed Action.

Page ES-13, fifth paragraph:

Although the number of potential accidents involving pedestrians or bicycles at trail/rail crossings could not be quantified because no agency keeps data on such incidents, SEA concluded that the consequences of increased train traffic on the EJ&E rail line would increase the risk for pedestrians

and bicycles at ~~those 21~~ 16 trail/rail at-grade crossings and decrease the risk at ~~the 36~~ 19 trail/rail at-grade crossings along the CN subdivisions.

Page ES-15, third paragraph, third sentence:

These are: Munger Alternative Connection – Original Proposal, Munger Alternative – UP Connection, Munger Alternative – Northwest Quadrant, ~~Joliet Alternative – Original Proposal,~~ Matteson Connection, and Matteson Alternative – Northeast and Southwest Quadrants.

Page ES-15, fourth paragraph, first and second sentences:

The proposed increase in rail traffic along the EJ&E rail line would potentially cause ~~increased noise~~ proximity effects on public lands adjacent to the line, affecting ~~17~~ 15 forest preserves, natural areas ~~and~~, nature preserves, resource-rich areas, and land and water reserves. ~~Increased noise associated with the Proposed Action would also potentially affect~~ Approximately 14 adjacent trails, greenways, and scenic corridors; ~~16~~ 22 adjacent local parks; and 4 adjacent land and water conservation fund properties are determined to have proximity effects due to the proposed increase in rail traffic along the EJ&E rail line.

Page ES-15, fifth paragraph, first and second sentences:

The Pratt's Wayne Woods Forest Preserve at the proposed Munger Connection and the Brewster Creek Fen and Nature Preserve are ~~the only~~ public forest preserve land that would be directly affected by the proposed construction activities of two of the alternatives. Because of the proximity of all proposed connection and double track construction activities, ~~11~~ 9 trails, greenways, and scenic corridors and 10 local parks would be affected.

Page ES-17, fourth paragraph, second sentence:

Although train operations would be more efficient, the distance traveled would be longer using the EJ&E rail line, resulting in a net increase in annual energy use of ~~639,442~~ 639,435 gallons per year of diesel fuel including trucks stopped at grade crossings.

Page ES-48, second paragraph, first sentence:

As discussed in the Draft EIS, SEA ~~does not find~~ found that wildlife ~~is likely to~~ had a slight possibility ~~to be~~ of being adversely impacted by the Proposed action and therefore ~~does~~ did not propose specific mitigation ~~at this time~~.

Page ES-54, Table ES-3:

Table ES-3. Public Meeting Dates and Locations

Date	Location	Address
Monday, August 25 Open House - 4:00 PM - 6:00 PM Public Meeting - 6:00 PM - 9:00 PM	Matteson, Illinois Holiday Inn Hotel & Convention Center	500 Holiday Plaza Drive Matteson, IL 60443
Tuesday, August 26 Open House - 4:00 PM - 6:00 PM Public Meeting - 6:00 PM - 9:00 PM	Mundelein, Illinois Crowne Plaza Chicago North Shore	510 E. Route 83 Mundelein, IL 60060
Wednesday, August 27 Open House - 4:00 PM - 6:00 PM Public Meeting - 6:00 PM - 9:00 PM	Barrington, Illinois Barrington High School	616 W. Main Street Barrington, IL 60010
Thursday, August 28 Open House - 4:00 PM - 6:00 PM Public Meeting - 6:00 PM - 9:00 PM	Bartlett, Illinois Bartlett High School	701 W. Schick Road Bartlett, IL 60103
Monday, September 8 Open House - 4:00 PM - 6:00 PM	Chicago, Illinois Loyola University of Chicago	25 East Pearson Street Chicago, IL 60611

Public Meeting - 6:00 PM - 9:00 PM	Rubloff Auditorium	
Tuesday, September 9 Open House - 4:00 PM - 6:00 PM Public Meeting - 6:00 PM - 9:00 PM	~~Gary, Indiana~~ ~~Indiana University Northwest~~ Aurora, Illinois West Aurora High School	~~3400 Broadway~~ ~~Gary, IN 46408~~ 1201 W. New York St Aurora, IL 60506
Wednesday, September 10 Open House - 4:00 PM - 6:00 PM Public Meeting - 6:00 PM - 9:00 PM	~~Aurora, Illinois~~ ~~West Aurora High School~~ Gary, Indiana Indiana University Northwest Savannah Center	~~1201 W. New York St~~ ~~Aurora, IL 60506~~ 3400 Broadway Gary, IN 46408
Thursday, September 11 Open House - 4:00 PM - 6:00 PM Public Meeting - 6:00 PM - 9:00 PM	Joliet, Illinois Holiday Inn Hotel & Conference Center	411 S. Larkin Avenue Joliet, IL ~~60435~~ 60436

2.14.5 Frequently Asked Questions of the Draft EIS

What is the STB's process for authorizing railroad consolidations and acquisitions of control?

Third paragraph:

There are statutory time limits for the STB's processing of merger/control applications. ~~For~~ Because the Board determined that the CN-EJ&E acquisition ~~application involving the proposed merger of a Class I and a Class II railroad~~ is a minor transaction, the STB's decision ~~is~~ normally would be due within ~~10~~ six months of the filing of the application (49 U.S.C. 11325(~~c~~ d)). However, the STB must also comply with the National Environmental Policy Act (NEPA), 42 U.S.C. 4321 *et seq*., in its decisionmaking and must complete the necessary environmental review process before making a final decision. Therefore, a final decision here will be issued as soon as possible after completion of the environmental review process.

2.14.6 Abbreviations, Acronyms, and Short Forms of the Draft EIS

Pages 1 through 4, Abbreviations, Acronyms, and Short Forms Table:

Abbreviations, Acronyms, and Short Forms	
Abbreviation, Acronym, or Short Form	**Definition**
ADID	advanced identification (of wetlands)
~~AHCP~~ ACHP	Advisory Council on Historic Preservation
CW	Chicago Wilderness
dBA	A-weighted decibels
ELM	ecological land management
HED	Hine's emerald dragonfly
ICLS	Illinois Compiled Statutes
INAI	Illinois Natural ~~Areas~~ Area Inventory
INHS	Illinois Natural History Survey
Ldn	day-night average sound levels
LRHR	Lake Renwick Heron Rookery
~~National Register~~ NRHP	National Register of Historic Places
STCC	~~Surface~~ Standard Transportation Commodity Code
T&E	Threatened and Endangered (Species)
Transaction** (Delete asterisks)	The proposed acquisition by Canadian National Railway Company and Grand Trunk Corporation of control of EJ&E West Company

Abbreviations, Acronyms, and Short Forms	
Abbreviation, Acronym, or Short Form	**Definition**
TNC	The Nature Conservancy

2.14.7 Glossary of the Draft EIS

Pages 1 through 17:

census block groups .....The U.S. Census Bureau uses this geographical unit, which is between the census tract and the census block. It is the smallest geographical unit for which the bureau publishes sample data, i.e., data that is only collected from a fraction of all households.

Chicago Subdivision .....One of five CN rail lines that converge in Chicago; this subdivision approaches Chicago from the south and constitutes the former Illinois Central Railroad Company (IC~~RR~~).

Control Point *(CP)* .....~~A location where remote control operators~~ The location of absolute signals controlled by a control operator that divert trains onto different tracks.

daily exposure .....The total number of potential conflicts at each rail/rail or highway/rail at-grade crossing based on the number of trains that cross the location in a 24-hour period.

EJ&E main line .....~~EJ&E's principle railroad track consisting of their eastern and western divisions and includes sidings, spurs, and yards at a number of different locations to serve train meets, customers, and/or hold freight cars.~~ A rail line in northeastern Illinois and northwestern Indiana that extends in a 120-mile arc around the city of Chicago.

EJ&E rail line .....~~A rail line in northeastern Illinois and northwestern Indiana that extends in a 120-mile arc around the city of Chicago.~~ EJ&E's principle railroad track consisting of their eastern and western divisions and includes sidings, spurs, and yards at a number of different locations to serve train meets, customers, and/or hold freight cars.

Elsdon Subdivision .....One of five CN rail lines that converge in Chicago; this subdivision approaches Chicago from the southeast.

Freeport Subdivision.....One of five CN rail lines that converge in Chicago, this Subdivision approaches Chicago from the west.

grade separated.....An intersection of roads or rail lines that is separated by a bridge, so that traffic flows do not conflict.

head protection elements .....Devices that limit the potential for puncturing the end of a rail car in an accident.

Joliet Subdivision.....One of five CN rail lines that converge in Chicago; this subdivision approaches Chicago from the southwest.

Local Emergency Planning

Committee *(LEPC)* ..... A group of ~~concerned~~ citizens and officials from local governments, law enforcement, fire and emergency medical services, hospitals, schools, civic and environmental groups, business and industrial facilities, and the news media that prepares for and manages emergencies associated with hazardous materials.

maintenance of way..... The repair and maintenance of a railroad's right-of-way, track, and structures.

marshaling ..... Another word for classification. See "classification" and "classification yard."

release interval ..... The expected time interval ~~between releases on a segment is essentially the average or expected time~~ that would elapse between two successive release events ~~on a particular rail segment~~.

repair in place *(RIP)* track ..... A designated track or tracks in a rail yard where locomotives and/or railroad cars are set ~~out~~ for ~~minor~~ repairs without removing the units from service, sometimes without even removing a freight load from the car. In some yards, a RIP track may be used for staging defective locomotives or ~~"bad order"~~ rail cars for major repairs. Some yards may have more than one RIP track ~~to serve both functions~~.

Surface Transportation Board.....An economic regulatory agency authorized by Congress to review proposed railroad mergers and acquisitions and rail constructions and abandonments, and resolve railroad rate and service disputes. The Board is decisionally independent, although it is administratively affiliated with the U.S. Department of Transportation.

TPC ..... A Train Performance Calculator (TPC) is an industry standard computer model that ~~looks at~~ analyzes the performance characteristics of a single train, such as trip duration, speed, fuel use, and fuel efficiency.

transloading..... The direct transfer of bulk materials from one mode to another, typically from train to truck, that sometimes includes intermediate storage.

universal crossover..... The location on a double track where trains in either direction can change from one track to another.

Waukesha Subdivision..... One of five CN rail lines that converge in Chicago; this subdivision approaches Chicago from the north.

Wheel Impact Load Detector

(WILD) ..... A device for the protection of rail infrastructure that continually monitors locomotive and rail car wheel ~~health~~ performance to ensure safe train operations~~, managing the wheel impact load spectrum for the targeted removal of defective wheels from service~~.

2.14.8 Chapter 1 of the Draft EIS

Page 1-5, third paragraph, second sentence:

The National Railroad Passenger Corporation, better known as Amtrak, provides passenger service in the Chicago metropolitan area on Amtrak-owned rail lines and by means of trackage rights granted by Class I railroads (BNSF, CN, UP, and NS) and by Metra.

Page 1-8, first paragraph, first sentence:

EJ&E operates on slightly more than ~~198~~ 200 miles of track in northeastern Illinois and northwestern Indiana.

Page 1-10, fifth paragraph, second sentence:

The projected increases in annual gross ton-miles per day would range from 78 to ~~1,280~~ 1,230 percent on 17 of the 18 EJ&E rail line segments.

Page 1-11, sixth paragraph, bulleted list:

- U.S. Department of Energy, Fermi National Accelerator Laboratory

Page 1-12, second paragraph, bulleted list:

~~o U.S. Department of Energy, Fermi National Accelerator Laboratory~~

- U.S. Senators and Representatives and State-Elected Officials

Page 1-16, seventh paragraph, first sentence:

The Board will host public meetings on the Draft EIS as ~~announced~~ listed in the ~~Dear Reader letter~~ Fact Sheet attached to this Draft EIS, above, or in Chapter 9, Section 9.6, below.

2.14.9 Chapter 2 of the Draft EIS

Page 2-12, third paragraph, first sentence:

Amtrak provides passenger service in the Chicago metropolitan area on rail lines owned by Amtrak and on rail lines owned by Class I railroads (BNSF, CN, UP, and NS) and Metra.

Page 2-12, third paragraph, third sentence:

Amtrak served more than ~~two~~ 2.8 million intercity passengers traveling to or from Chicago in 200~~2~~7 and currently operates about 78 trains per day (CREATE 2005; Amtrak 2008c).

Page 2-12, fourth paragraph, fourth sentence:

Amtrak's *City of New Orleans* train operates a daily round trip between New Orleans, Louisiana and Chicago, and its *Illini* and *Saluki* trains ~~each~~ together operate a twice-daily round trip between Chicago and Champaign/Carbondale, Illinois (Amtrak 2008c).

Page 2-12, fifth paragraph:

Amtrak crosses CN's rail lines ~~in six places~~ at six locations within the Chicago metropolitan area, four grade-separated and two at-grade crossings. ~~At-grade crossings occur at four locations in Chicago, and two grade-separated crossings occur at Berwyn and Harvey, Illinois (Applicants 2008a)~~. Amtrak operates on CN's Chicago Subdivision as described above and on a portion of CN's Elsdon Subdivision (from Harvey to Munster, Indiana) and the South Joliet and Freeport Subdivisions (Amtrak 2008b).

Page 2-14, second paragraph, third sentence:

Metra also operates in partnership with NICTD, which runs ~~41~~ 37 trains per day from South Bend, Indiana, to Millennium Station in Chicago (NICTD 2007a).

Page 2-14, third paragraph, fifth and sixth sentence:

At-grade crossings occur at Des Plaines, Franklin Park, Chicago, ~~Bartlett~~ Ashburn, and Joliet~~, and Blue Island~~ in Illinois, and ~~a~~ grade-separated crossings occur~~s~~ in Elmhurst and Blue Island, Illinois (Applicants 2008c). Metra operates on CN's Waukesha Subdivision from ~~Mundelein~~ Antioch to Franklin Park, Illinois, and shares CN's Chicago Subdivision from ~~Harvey~~ University Park, Illinois, to ~~Munster, Indiana~~ 16th Street in Chicago, Illinois (Metra 2006a).

Page 2-15, fourth paragraph, third sentence:

NICTD operates ~~41~~ 37 weekday trains (~~20~~ 18 westbound and ~~21~~ 19 eastbound) (NICTD 2007a).

Page 2-21, second paragraph, sixth and seventh sentences:

~~Certain~~ Some of these locations are also used ~~as interchanges of trains and freight~~ to interchange rail cars between railroads. During ~~SEA's~~ on-site visits, SEA inspected ~~included on railroad ROW inspection of~~ the EJ&E rail system on its railroad ROW.

Page 2-48, first paragraph, second sentence:

To potentially avoid this land, ~~the Forest Preserve District of DuPage County (FPDDC)~~ SEA put forth an alternative to the Applicants' Proposed Munger Connection, which is proposed to be sited in the southwest quadrant.

Pages 2-20, Table 2-8 (This is only a portion of the table):

Table 2-8. Proposed Changes in Train Traffic Volume on CN Rail Lines

From Station	To Station	Existing No. of Trains	Anticipated Change[a]	Projected Total
Joliet Subdivision				
Joliet (near Joliet, Illinois)	Argo (near Summit, Illinois)	~~1.8~~ 2.0	~~0.2~~ 0	2.0
Argo	Glenn Yard (in Chicago)	5.8	(3.8)	2.0
Glenn Yard	Lemoyne (in Chicago)	2.1	(0.1)	2.0
Lemoyne	Bridgeport (in Chicago)	2.1	(2.1)	0.0

Pages 2-71 and -75, Table 2-9 (This is only a portion of the table):

TABLE 2-9. SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS DUE TO CHANGES IN RAIL OPERATIONS		
Resource Category	**No-Action Alternative**	**Proposed Action**
Rail Operations		
Freight Rail Operations	The No-Action Alternative would not affect freight rail operations.	The Applicants' train traffic projections are reasonable and are not likely to be exceeded by 2015.~~.~~
Land Use		
Trails, Greenways, Scenic Corridors	The No-Action Alternative would not affect trails, greenways, or scenic corridors.	The Proposed Action has the potential to affect 14 trails, greenways, or scenic corridors ~~due to increased noise levels and delay at pedestrian/rail at-grade crossings~~.
Local parks	The No-Action Alternative would not affect local parks.	The Proposed Action has the potential to affect ~~23~~ 22 existing or planned local parks ~~due to increased noise levels and delay at pedestrian/rail at-grade crossings~~.
Land and Water Conservation Fund Properties	The No-Action Alternative would not affect Land and Water Conservation Fund properties.	The Proposed Action has the potential to affect four properties ~~due to increased noise levels and delay at pedestrian/rail at-grade crossings~~.
Environmental Justice[a]		
Minority Populations along the EJ&E Rail Line	Under the No-Action Alternative, impacts on minority populations along the EJ&E rail line would be the same as those experienced under existing conditions.	Under the Proposed Action, minority populations along the EJ&E rail line would not experience disproportionate impacts from safety and delay at highway/rail at-grade crossings, but would experience high and adverse impacts due to train noise.
Low-Income Populations along the EJ&E Rail Line	Under the No-Action Alternative, impacts on low-income populations along the EJ&E line would be the same as those experienced under existing conditions.	Under the Proposed Action, low-income populations along the EJ&E rail line would not experience disproportionate impacts from safety and delay at highway/rail at-grade crossings, but would experience high and adverse impacts due to train noise.
Minority and Low-Income Populations along the CN Rail Lines	Under the No-Action Alternative, ~~the number of trains would decrease along the CN rail lines as described in the Application. Minority and low-income populations along the CN rail lines in Chicago metropolitan area would benefit from decreasing train traffic~~ impacts on minority and low-income populations along the CN rail lines would be the same as those experienced under existing conditions.	Under the Proposed Action, the environmental justice communities traversed by or adjacent to these rail segments would experience beneficial impacts related to hazardous materials transport, safety and delay at highway/rail at-grade crossings, and train noise from the decreased train traffic on the CN rail lines.
Biological Resources[b]		

TABLE 2-9. SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS DUE TO CHANGES IN RAIL OPERATIONS		
Resource Category	**No-Action Alternative**	**Proposed Action**
Plant Communities	The No-Action Alternative would not change effects on plant communities.	The Proposed Action ~~would not affect plant communities~~ may affect plant communities due to a higher probability of hazardous materials spills. However, since the probability of an accidental spill is still remote, impacts are expected to be minimal. No impacts due to reduced traffic on CN.
Wildlife	The No-Action Alternative would not change effects on wildlife.	The Proposed Action ~~would not affect wildlife~~ may affect wildlife due to increased noise and higher probability of spills and train-animal collisions. Decreased traffic along CN lines are expected to be beneficial to wildlife; however, most beneficial habitat is on the outside EJ&E arc.
Federal, State, or Local Conservation and Natural Areas	The No-Action Alternative would not change effects on Federal, state, and local conservation and natural areas.	The Proposed Action ~~would not affect conservation and natural areas~~ may affect wildlife and plant communities that adjoin the rail lines. Impacts to areas outside of the Study Area are expected to be minimal to non-existent. Decreased traffic along CN lines would result in beneficial impacts to Conservation and Natural Areas. However, most beneficial areas are on the outside EJ&E Arch.
Federally-Listed Threatened and Endangered Species	The No-Action Alternative would not change effects on Federally-listed threatened and endangered species.	~~With the appropriate mitigation,~~ The Proposed Action may affect, but is not likely to adversely affect the Hine's emerald dragonfly. The Proposed Action is not likely to adversely affect the Karner blue butterfly. The Proposed Action will not affect the Prairie Fringed Orchid.
State-Listed Threatened and Endangered Species	The No-Action Alternative would not change effects on state-listed threatened and endangered species.	~~State-listed species along the EJ&E rail line may have individual effects due to train collisions or increased noise~~ State-listed species most likely to be affected by the proposed action include Blanding's and spotted turtles; however, mitigation to facilitate movement across tracks would minimize impacts to the species. Other state-listed species may have individual effects due to train collisions. The proposed relocation of rail traffic from the existing CN rail line within the Hoosier Prairie Area to the EJ&E rail line near the edge of the Hoosier Prairie Area would result in a beneficial effect

TABLE 2-9. SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS DUE TO CHANGES IN RAIL OPERATIONS		
Resource Category	**No-Action Alternative**	**Proposed Action**
		on dune invertebrate species.

Notes:

[a] The governing regulation for environmental justice analysis, Executive Order 12898, uses the term "disproportionately high and adverse impacts" to refer to potential effects on environmental justice populations. Therefore, this section refers to impacts rather than effects.

[b] The wording used in this section is required by Section 7 of the Endangered Species Act of 1973 (16 USC 1531 et seq.) for quantifying potential effects on listed species

Pages 2-80 through -81, Table 2-10 (This is only a portion of the table):

Table 2-10. Summary of Potential Environmental Impacts – Munger Connection					
Resource Category	**No-Action at Munger**	**Proposed Munger Connection**	**Munger Alternative Configurations**		
			Original Proposal	**UP Connection**	**Northwest Quadrant**
Transportation Systems					
Emergency Response	Would not affect existing emergency service response.	~~Would not affect existing emergency service response.~~ Would potentially delay existing emergency response.	~~Would not affect existing emergency service response.~~ Would potentially delay existing emergency response.	~~Would not affect existing emergency service response.~~ Would potentially delay existing emergency response.	~~Would not affect existing emergency service response.~~ Would potentially delay existing emergency response.
Land Use					
Current or Future Land Use Patterns	Would not affect land use patterns because no construction or acquisition of new ROW would occur.	Would not affect land use patterns since construction would occur on lands primarily identified for transportation and utility uses.	Would affect land use patterns because the connection would be constructed on 0.69 acre of ~~forest preserve property~~ open space land.	Would affect land use patterns because 2.86 acres of open space land and 0.58 acres of residential land would be acquired to construct this connection.	Would affect land use patterns because 2.37 acres of open space land would be acquired to construct this connection.
Public Lands	Would not affect public lands.	Would not affect public lands.	Would affect Pratt's Wayne Woods Forest Preserve.	Would ~~not~~ affect ~~public lands~~ Brewster Creek Fen and Nature Preserve.	Would affect Pratt's Wayne Woods Forest Preserve.

Table 2-10. Summary of Potential Environmental Impacts – Munger Connection					
Resource Category	No-Action at Munger	Proposed Munger Connection	Munger Alternative Configurations		
			Original Proposal	UP Connection	Northwest Quadrant
Biological Resources					
Wildlife	No effect.	Would result in increased noise and ~~indirect~~ loss of habitat, potentially decreasing the breeding activity of marsh birds.	~~No effect~~. Would result in loss of wetland habitat; wildlife may be impacted by increased noise and mortality.	~~No effect.~~ Would result in loss of wetland habitat; would avoid habitat impacts to PWWFP. Wildlife may be impacted by increased noise ant mortality.	~~No effect.~~ Would result in loss of wetland habitat; would avoid habitat impacts to PWWFP. Wildlife may be impacted by increased noise ant mortality.
Federal, State or Local Conservation and Natural Areas	No effect.	Would affect Pratt's Wayne Woods Forest Preserve.	~~No effect.~~ Would affect Pratt's Wayne Woods Forest Preserve.	No effect.	Would affect Pratt's Wayne Woods Forest Preserve.
Federally-Listed Threatened and Endangered Species	No effect.	~~No effect~~. Not likely to adversely affect Prairie Fringe Orchid.	~~No effect~~. Not likely to adversely affect Prairie Fringe Orchid.	~~No effect~~. Not likely to adversely affect Prairie Fringe Orchid..	~~No effect~~. Not likely to adversely affect Prairie Fringe Orchid.
State-Listed Threatened and Endangered Species	No effect.	Minor effects on marsh and wetland reptile and plant species.	Minor effects on marsh and wetland reptile and plant species.	Minor effects on marsh and wetland reptile and plant species.	Minor effects on marsh and wetland reptile and plant species.

Page 2-88, Table 2-11 (This is only a portion of the table):

Table 2-11. Summary of Potential Environmental Impacts - Joliet Connection			
Resource Category	**No-Action at Joliet**	**Proposed Joliet Connection**	**Joliet Alternative - Original Proposal**
Biological Resources			
Plant Communities	No effect.	Would affect railroad embankment, ~~and~~ immature forest, and degraded riparian vegetation.	No effect on plant communities - construction would occur on industrial land.
Wildlife	No effect.	~~No effect.~~ Would result in loss of degraded woody and wetland habitat; impacts to wildlife expected to be minimal since area is urbanized.	No effect.

Page 2-90, Table 2-12 (This is only a portion of the table):

Table 2-12. Summary of Potential Environmental Impacts – Matteson Connection				
Resource Category	No-Action at Matteson	Proposed Matteson Connection	Matteson Alternative Configurations	
			Northeast and Southwest Quadrants	Southwest Quadrant
Transportation Systems				
Emergency Response	Would not affect existing emergency service response.	~~Would affect existing emergency service response.~~ Would potentially delay existing emergency service response.	~~Would affect existing emergency service response.~~ Would potentially delay existing emergency service response.	~~Would affect existing emergency service response.~~ Would potentially delay existing emergency service response.
Wildlife	No effect.	No effect.	~~No effect.~~ Would result in loss of wetland and forested habitat; however impacts to wildlife would be minimal since site is highly urbanized and habitat is currently fragmented.	~~No effect.~~ Would result in loss of wetland and forested habitat; however impacts to wildlife would be minimal since site is highly urbanized and habitat is currently fragmented.
Federally-Listed Threatened and Endangered Species	No effect.	No effect.	~~No effect~~. May affect but not likely to adversely affect	~~No effect~~. May affect but not likely to adversely affect

Page 2-96 through -98, Table 2-13 (This is only a portion of the table):

Table 2-13. Summary of Potential Environmental Impacts – Griffith Connection		
Resource Category	No-Action at Griffith	Proposed Griffith Connection
Transportation Systems		
Emergency Response	Would not affect existing emergency service response.	~~Would not affect existing emergency service response.~~ Would potentially delay existing emergency service response.
Land Use		
Local Parks or Land and Water Conservation Properties	Would not affect local parks or Land and Water Conservation properties.	~~Would not affect local parks or Land and Water Conservation properties.~~ May affect Griffith Historical Park and Depot Museum.
Biological Resources		
Wildlife	No effect.	~~No effect~~. Loss of remnant prairie, forest and wetland habitat may impact wildlife due to increased disturbance and mortality.
Federally-Listed Threatened and Endangered Species	No effect.	~~No effect~~. May affect, but not likely to adversely affect Eastern Prairie Fringed Orchid.

Page 2-99, Table 2-14 (This is only a portion of the table):

Table 2-14. Summary of Potential Environmental Impacts – Ivanhoe Connection		
Resource Category	**No-Action at Ivanhoe**	**Proposed Ivanhoe Connection**
Transportation Systems		
Emergency Response	Would not affect existing emergency service response.	~~Would not affect existing emergency service response.~~ Would potentially delay existing emergency service response.
Biological Resources		
Wildlife	No effect.	~~No effect~~. Loss of degraded habitat; wildlife may be impacted due to increased noise and mortality.
Federally-Listed Threatened and Endangered Species	No effect.	~~No effect with restoration of dune and swamp habitat.~~ Not likely to adversely affect Karner Blue Butterfly or Prairie Fringed Orchid.
State-Listed Threatened and Endangered Species	No effect.	Potential effect on ~~wetlands and~~ wetland and dry woodlands species, prairie plant species, and grassland bird species.
Water Resources		
Wetlands	Would not affect wetlands.	~~Would not affect wetlands~~. May impact wetlands.

Page 2-104, Table 2-15 (This is only a portion of the table):

Table 2-15. Corrected Summary of Potential Environmental Impacts – Kirk Yard Connection		
Resource Category	**No-Action at Kirk Yard**	**Proposed Kirk Yard Connection**
Biological Resources		
Wildlife	No effect.	~~No effect.~~ Loss of prairie habitat.
State-Listed Threatened and Endangered Species	No effect.	~~Potential effect on wetlands and prairie species.~~ May affect, but not likely to adversely affect prairie plant species.

Page 2-106, Table 2-16 (This is only a portion of the table):

Table 2-16. Summary of Potential Environmental Impacts – Double Track				
Resource Category	**Leithton**	**Diamond Lake Road to Gilmer Road**	**East Siding to Walker (2 Locations)**	**East Joliet to Frankfort**
Land Use				
Zoning	Would ~~be consistent with~~ not affect current zoning.	Would be consistent with current zoning.	Would not affect current zoning.	Would not affect current zoning.
Biological Resources				
Plant Communities	Would affect	Would affect	Would affect railroad	Would affect

Table 2-16. Summary of Potential Environmental Impacts – Double Track				
Resource Category	**Leithton**	**Diamond Lake Road to Gilmer Road**	**East Siding to Walker (2 Locations)**	**East Joliet to Frankfort**
	railroad embankment, wetland, and woody growth areas. May increase invasive species.	railroad embankment, immature forest, and woody growth areas. May increase invasive species.	embankment, immature forest, and woody growth areas. May increase invasive species.	railroad embankment, immature forest, woody growth, and grass areas. May increase invasive species.
Wildlife	~~No effect.~~ Loss and fragmentation of wetland habitat; may displace wildlife and increase mortality due to train collisions.	~~No effect.~~ Loss and fragmentation of wetland habitat; may displace wildlife and increase mortality due to train collisions.	~~No effect.~~ Loss and fragmentation of wetland habitat; may displace wildlife and increase mortality due to train collisions.	~~No effect.~~ Loss and fragmentation of wetland habitat; may displace wildlife and increase mortality due to train collisions.
Federal, State or Local Conservation and Natural Areas	No effect.	No effect.	~~No effect.~~ Night Heron Marsh.	No effect.
Federally-Listed Threatened and Endangered Species	~~No effect.~~ May affect, not likely to adversely affect Prairie Fringed Orchid.	~~No effect.~~ May affect, not likely to adversely affect Prairie Fringed Orchid.	~~No effect.~~ May affect, not likely to adversely affect Prairie Fringed Orchid.	~~No effect.~~ May affect, not likely to adversely affect Prairie Fringed Orchid.
State-Listed Threatened and Endangered Species	Potential effects on marsh bird, plant and reptile species.	Potential effects on wetland plant and marsh bird and reptile species.	Potential effects on prairie plant and marsh bird and reptile species.	Potential effects on marsh bird and reptile species.

2.14.10 Chapter 3 of the Draft EIS

2.14.11 Rail Operations

Page 3.1-4, third paragraph, third sentence:

The third yard, the Whiting Yard is located ~~just southeast~~ 6 miles northwest of Kirk Yard, and is used primarily to serve local customers (see Figure 1.2-2, Yard Locations, in Chapter 1).

Page 3.1-23, Table 3.1-4 (This is only a portion of the table):

Table 3.1-4. CN Rail/Rail Crossings						
Crossing Name	CN Subdivision and Milepost	Crossing Railroad	Current CN Traffic (TPD)	Passenger Trains on CN Rail Line (TPD)	Passenger Trains on CN Rail Line Crossed (TPD)	Freight Trains Crossing CN (TPD)
Illinois						
Deval	Waukesha 23.4	UP/Metra	19.1	~~22~~ 21 Metra	65 Metra	10
21st Street	Freeport 2.0	Amtrak	6.4	0	12 Amtrak, 30 Metra	0
16th Street	Chicago 1.5	Metra /SCAL	4.6	6 Amtrak	68 Metra	0

Page 3.1-25, first paragraph, fourth sentence:

Inbound trains to Chicago are operated from the ~~locomotive~~ cab car, and outbound trains are operated from the ~~cab car~~ locomotive.

Page 3.1-25, third paragraph, third and fourth sentences:

Heritage Corridor trains operate on CN's Joliet and Freeport subdivisions between Joliet and ~~16th~~ 21st Street in Chicago. North of ~~16th~~ 21st Street, Heritage Corridor service trains use tracks owned by Amtrak to enter Union Station.

Page 3.1-25, fourth paragraph, first sentence:

Metra's existing North Central Service operates 22 weekday trains between Chicago and Antioch, Illinois~~, during weekday morning and evening peak periods~~.

Page 3.1-26, Table 3.1-5:

Table 3.1-5. EJ&E and Metra Rail/Rail At-Grade Crossings						
Location	EJ&E MP	Intersecting Railroad	Metra Route Crossed	Number of Tracks	Daily EJ&E Freight Trains	Weekday Metra Trains
Barrington	W-49.6	UP	UP-Northwest Line	UP 2 EJ&E 1	5.3	62
Spaulding	W-37.5	~~CPR~~ Metra	Milwaukee District West Line	CPR 2 EJ&E 1	5.5	49
West Chicago	W-28.9	UP	UP-West Line	UP 3 EJ&E 1	10.7	52
Joliet-Rock Island Tower	E-0.8	Metra	Rock Island District	Metra 2 EJ&E 2	6.4	46

Source: Applicants (2007a), STB Finance Docket No. 35087, Canadian National Railway Company and Grand Trunk Corporation–Control–EJ&E West Company, Railroad Control Application, October 30, 2007.

Page 3.1-26, first paragraph:

Metra trains also operate on ~~seven~~ five other rail lines that cross the EJ&E rail line using grade-separated structures.

Page 3.1-26, fourth paragraph, fourth bullet:

- Inaugurating the SouthEast Service between Chicago's ~~Union~~ LaSalle Street Station and Crete, Illinois, along the joint UP and CSX corridor (formerly Chicago and Eastern Illinois Railroad), which extends south from Chicago and crosses the EJ&E rail line in Chicago Heights

Page 3.1-34, third paragraph, first and second sentence:

Amtrak also operates 10 daily trains on CN's Joliet and Freeport subdivisions between Joliet and ~~16th~~ 21st Street in Chicago—eight Lincoln service trains and two Texas Eagle Trains. North of ~~16th~~ 21st Street, these Amtrak trains use trackage owned by Amtrak to enter directly into Union Station.

Page 3.1-34, fifth paragraph:

Amtrak operates 16 daily trains that cross the EJ&E rail line using at-grade interlockings with the ~~CP~~ Metra North line in Rondout, Illinois. These include 14 daily Hiawatha service trains and two daily Empire Builder trains (Amtrak 2008a), less on weekends.

2.14.12 Safety

Page 3.2-9, Table 3.2-8:

Table 3.2-8. Hazardous Materials Transported by CN on CN Rail Lines in the Study Area in 2006

Segment Number	From Station	To Station	Cars per Day	Tons per Day
Illinois				
1	Matteson	Markham	191.2	16,212
2	Markham	Harvey	249.1	20,287
3	Harvey	Riverdale	94.4	6,970
4	Riverdale	Wildwood	82.0	6,013
5	Wildwood	Kensington	82.0	6,013
6	Kensington	94th Street	77.0	6,565
7	94th Street	67th Street	76.0	6,488
8	67th Street	16th Street	76.0	6,488
9	16th Street	Bridgeport	67.9	5,751
10	Bridgeport	Belt Crossing	62.0	4,992
11	Belt Crossing	Hawthorne	~~84.0~~ 84.2	6,788
12	Hawthorne	Broadview	71.5	5,792
13	Broadview	Munger	61.1	4,981
14	Bridgeport	Lemoyne	59.4	4,165
15	Lemoyne	Glenn Yard	90.6	6,452
16	Glenn Yard	Argo	139.6	11,126
17	Argo	Lemont	71.9	5,661
18	Lemont	Joliet	39.0	3,029
19	Madison Street	Forest Park	76.8	6,414
20	Forest Park	Tower B12	76.8	6,414
21	Tower B12	Schiller Park	157.0	12,843
22	Schiller Park	Leithton	156.8	12,796
24	Thornton Junction	CN Junction	272.9	23,296

Table 3.2-8. Hazardous Materials Transported by CN on CN Rail Lines in the Study Area in 2006				
Segment Number	From Station	To Station	Cars per Day	Tons per Day
25	CN Junction	Blue Island	160.2	13,269
26	Blue Island	Hayford	38.8	3,204
Indiana and Illinois				
23	Griffith	Thornton Junction	280.6	23,875

Source: Applicants (2008d), letter from Paul A. Cunningham, Counsel for Canadian National Railway Company and Grand Trunk Corporation, Harkins Cunningham LLP, to The Honorable Vernon A. Williams, Secretary, Surface Transportation Board, regarding corrections and clarifications to the Railroad Control Application, January 3, 2008.

2.14.13 Highway Rail Crossings

Page 3.2-18, first paragraph, last sentence:

In addition, tables in Appendix C summarize the predicted accident frequency for each crossing under existing conditions. SEA has made corrections to the highway/rail crossing inventory that were included within Appendix C of the Draft EIS. These changes were due to the following:

- In the interest of brevity, SEA has removed the columns from the Draft EIS table that showed the "Municipality", "County", and "State" to allow the table to be displayed in a more readable format. This deleted information is redundant with, and can be found within, the Public At-Grade Crossing Safety and Delay Analysis table and elsewhere within the document.
- SEA received a letter from the Illinois Commerce Commission dated September 29, 2008, that identified several crossings that were closed (shown by strike through text) or additional crossings (shown in red text). SEA reviewed the corrections suggested by the ICC and concurs with their corrections.
- The revisions resulted in a change in the summary totals. These changes are shown in red.
- ICC noted within their letter, and SEA concurs that "None of the public grade crossings [corrections] are located on the Applicants' or the EJ&W's mainline tracks and the remaining locations are private grade crossings. The net result with respect to the DEIS analysis is null, but ICC Staff believes the most accurate information should be included in the EIS."

2.14.14 Transportation Systems

Page 3.3-3, first paragraph, second sentence:

These include ~~214~~ 112 crossings on the Western and Eastern Divisions.

Pages 3.3-10 and -11, Table 3.3-3 (This is only a portion of the table):

Table 3.3-3. Existing Vehicle Delays at EJ&E Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D_C	D_A	N	T_D	NL	Q	D_V				
Will County, Illinois														
Near Plainfield, Illinois														
Normantown/ 252nd Street[a]	~~NA~~ 1,967	3,881	30	2.0	1.3	15.7	0	2	0	0.00	~~NA~~ A	~~NA~~ A		
135th Street	9,288	3,398	29	1.8	1.2	15.7	185	2	17	0.05	A	D		
Van Dyke Road	5,464	3,398	32	1.7	1.1	~~18.5~~ 15.7	~~120~~ 102	2	9	~~0.05~~ 0.04	A	B		
Plainfield, Illinois														
143rd Street	4,699	3,398	33	1.7	1.1	~~18.5~~ 15.7	~~101~~ 86	2	8	~~0.05~~ 0.04	A	B		
Southeastern Cook County, Illinois														
Matteson, Illinois														
Main Street	4,040	3,795	~~36~~ 29	~~1.7~~ 2.0	~~1.1~~ 1.3	8.6	~~41~~ 48	2	~~7~~ 8	~~0.02~~ 0.03	A	B		
Griffith, Indiana														
Broad Street	15,450	~~2,717~~ 3,261	~~23~~ 17	~~1.8~~ 2.7	~~1.2~~ 1.7	7.6	~~150~~ 219	2	~~28~~ 41	~~0.02~~ 0.05	A	E		

Note:
[a] Normantown/252nd Street is currently blocked. 2007 ADT for Normantown/252nd Street is 1,967.

Pages 3.3-18 through -25, Table 3.3-5 (This is only a portion of the table):

Table 3.3-5. Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length (Feet)	Blocked Major Intersection
		L	V	D_C	D_A	N	T_D	NL	Q	D_V				
Cook County, Illinois (Waukesha Subdivision)														
River Forest, Illinois														
Forest Avenue	2,590	6,104	30	2.8	1.8	~~3.5~~ 5.4	~~18~~ 27	2	7	0	A	A		
Augusta Street	2,590	6,104	30	2.8	1.8	~~3.5~~ 5.4	~~18~~ 27	2	7	0	A	A		
Keystone Avenue	2,590	6,104	30	2.8	1.8	~~3.5~~ 5.4	~~18~~ 27	2	7	0	A	A		
Thatcher Avenue	8,568	6,104	30	2.8	1.8	~~3.5~~ 5.4	~~59~~ 90	3	16	0	A	C		
River Grove, Illinois														
1st Avenue (IL 171)	27,363	6,104	30	2.8	1.8	~~3.5~~ 5.4	~~187~~ 289	4	38	0	A	C	950	North Avenue (Il 64)
5th Avenue	10,404	6,104	30	2.8	1.8	~~3.5~~ 5.4	~~71~~ 110	4	15	0	A	B		
Melrose Park, Illinois														
George Street	3,978	6,104	28	3.0	1.9	~~3.5~~ 5.4	~~29~~ 44	2	12	0	A	A		
Franklin Park, Illinois														
Fullerton Avenue	4,080	6,104	25	3.3	2.1	~~3.5~~ 5.4	~~32~~ 50	2	13	0	A	B		
Chestnut Avenue	2,000	6,104	19	4.2	2.7	~~3.5~~ 5.4	~~20~~ 31	2	8	0	A	A		
Des Plaines, Illinois														
Prospect Avenue	4,188	6,468	29	3.0	2.0	19.1	169	2	13	0	A	~~A~~ B	325	Rand Road (US 12)
Rand Road (US 12)	~~25,490~~ 29,865	6,468	27	3.2	2.1	19.1	1,089	4	41	0	B	~~C~~ D		

Table 3.3-5. Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length (Feet)	Blocked Major Intersection
		L	V	D_C	D_A	N	T_D	NL	Q	D_V				
Lake County, Illinois (Waukesha Subdivision)														
Near Vernon Hills, Illinois														
US 45	18,672	6,468	42	~~3.1~~ 2.3	~~0.9~~ 1.5	19.1	~~333~~ 557	3	~~17~~ 28	0	A	E		
Mundelein, Illinois														
Townline Road (IL 60)	36,919	6,468	41	~~1.4~~ 2.3	~~0.4~~ 1.5	19.1	~~670~~ 1,123	4	~~25~~ 42	0	A	E	~~1,200~~ 1,050	Butterfield Road
Allanson Road	16,719	6,468	35	2.7	1.8	~~19.1~~ 20.8	~~600~~ 654	2	45	0	A	F		
Hawley Street	7,103	6,468	35	2.7	1.8	~~19.1~~ 20.8	~~255~~ 278	3	13	0	A	C		
Park Street	578	6,468	35	2.7	1.8	~~19.1~~ 20.8	~~21~~ 23	2	2	0	A	A		
Maple Avenue	11,882	~~6,468~~ 6,800	35	2.7	1.8	~~19.1~~ 20.8	~~427~~ 465	2	32	0	A	~~A~~ C	775	Lake Street (US 45)
Dunbar Road	390	~~6,468~~ 6,800	40	2.4	1.6	~~19.1~~ 20.8	~~13~~ 14	2	1	0	A	A		
Winchester Road	5,901	~~6,468~~ 6,800	40	2.4	1.6	~~19.1~~ 20.8	~~190~~ 207	4	7	0	A	C	200	Lake Street (US 45)
Grayslake, Illinois														
Peterson Road	17,484	~~6,468~~ 6,800	45	2.2	1.4	~~19.1~~ 20.8	~~514~~ 560	5	16	0	A	F		
Harris Road	3,500	~~6,468~~ 6,800	45	2.2	1.4	~~19.1~~ 20.8	~~103~~ 112	2	8	0	A	~~B~~ A		
Cook County, Illinois (Freeport Subdivision)														
Broadview, Illinois														
17th Avenue	9,690	6,690	19	~~5.0~~ 4.5	~~3.0~~ 2.9	~~4.0~~ 4.4	133	4	22	0	A	A		
~~Du Page~~ DuPage County, Illinois (Freeport Subdivision)														
Elmhurst, Illinois														
Vallette Street	3,342	6,750	35	~~3.0~~	~~2.0~~	3.0	19	2	9	0	A	A		

Table 3.3-5. Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length (Feet)	Blocked Major Intersection
		L	V	D_C	D_A	N	T_D	NL	Q	D_V				
				2.7	1.7									
Spring Road	8,593	6,755	40	~~2.0~~ 2.4	~~2.0~~ 1.6	3.0	43	2	21	0	A	C		
Near Bartlett, Illinois														
Powis Road	4,350	4,600	25	2.6	1.7	~~3.0~~ 2.0	~~23~~ 16	2	11	0	A	B		
Kane County, Illinois (Freeport Subdivision)														
South Elgin, Illinois														
IL 25	8,858	4,600	45	1.7	1.1	~~3.0~~ 2.0	~~30~~ 20	2	14	0	A	C		
Randall Road	36,462	4,600	45	1.7	1.1	~~3.0~~ 2.0	~~126~~ 84	4	30	0	A	F		
Cook County, Illinois (Joliet Subdivision)														
Willow Springs, Illinois														
Old Willow Springs Road	~~18,054~~ 1,938	6,103	40	2.2	1.5	1.8	~~50~~ 5	2	~~40~~ 4	0	A	A		
Lemont, Illinois														
Pruxne Street/Illinois Street	6,120	6,103	35	~~2.0~~ 2.5	~~2.0~~ 1.6	1.8	19	2	15	0	A	C	380	Main Street
Holmes Street	385	6,103	35	~~2.0~~ 2.5	~~2.0~~ 1.6	1.8	1	2	1	0	A	A		
Stephen Street	12,138	6,103	33	~~3.0~~ 2.6	~~2.0~~ 1.7	1.8	39	2	32	0	A	~~A~~ E	800	Main Street
Lemont Street	1,000	6,103	32	~~3.0~~ 2.7	~~2.0~~ 1.7	1.8	3	2	3	0	A	~~F~~ A		
Will County, Illinois (Joliet Subdivision)														
Lockport, Illinois														
2nd Street	34	4,659	35	2.0	~~1.0~~ 1.3	1.8	0	2	0	0	A	A		
6th Street	126	4,659	35	2.0	~~1.0~~ 1.3	1.8	0	2	0	0	A	A		
9th Street (IL 7)	23,870	4,659	35	2.0	~~1.0~~ 1.3	1.8	60	2	48	0	A	F	1,200	State Street

Table 3.3-5. Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length (Feet)	Blocked Major Intersection
		L	V	D_C	D_A	N	T_D	NL	Q	D_V				
														(IL 171)
10th Street	126	4,659	35	2.0	~~1.0~~ 1.3	1.8	0	2	0	0	A	A		
11th Street	242	4,659	35	2.0	~~1.0~~ 1.3	1.8	1	2	0	0	A	A		
Joliet, Illinois														
Ohio Street	5,682	4,659	~~35~~ 10	~~2.0~~ 5.8	~~1.0~~ 3.8	1.8	~~14~~ 41	2	~~11~~ 33	0	A	B	~~275~~ 825	Scott Street (IL 53)
Jackson Street	16,088	4,659	~~35~~ 10	~~2.0~~ 5.8	~~1.0~~ 3.8	1.8	~~40~~ 117	2	~~32~~ 93	0	A	C		
Will County, Illinois (Chicago Subdivision)														
~~University Park~~ Richton Park, Illinois														
University Parkway/Stuenkel Road	10,768	5,400	45	1.9	~~1.0~~ 1.2	~~12.8~~ 13.8	~~178~~ 192	4	10	0	A	E	420	W Dralle Road
University Park, Illinois														
W Dralle Road	3,167	5,400	45	~~2.0~~ 1.9	~~1.0~~ 1.2	~~13~~ 13.8	~~52~~ 57	4	3	0	A	A	125	South Governors Highway
Cook County, Illinois (Elsdon/South ~~b~~Bend Subdivision)														
Chicago, Illinois														
51st Street[a]	2,046	4,365	8	6.7	4.4	1.6	15	2	14	0	A	A		
51st Street[a]	2,046	4,365	8	~~7.0~~ 6.7	~~4.0~~ 4.4	~~3.0~~ 1.6	~~31~~ 15	2	14	0	A	A		
55th Street	26,826	4,365	8	~~7.0~~ 6.7	~~4.0~~ 4.4	~~3.0~~ 1.6	~~412~~ 200	4	90	0	A	F		
71st Street	14,178	4,365	8	~~7.0~~ 6.7	~~4.0~~ 4.4	~~3.0~~ 1.6	~~218~~ 106	2	95	0	A	F		
79th Street	25,000	4,365	8	~~7.0~~ 6.7	~~4.0~~ 4.4	3.4	396	4	84	0	A	C		
Columbus Avenue	15,402	4,365	8	~~7.0~~ 6.7	~~4.0~~ 4.4	3.4	244	4	52	0	A	A		
83rd Place	1,114	4,365	8	~~7.0~~	~~4.0~~	3.4	18	2	7	0	A	A		

Table 3.3-5. Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length (Feet)	Blocked Major Intersection
		L	V	D_C	D_A	N	T_D	NL	Q	D_V				
				6.7	4.4									
115th Street	13,260	4,365	8	~~7.0~~ 6.7	~~4.0~~ 4.4	3.4	210	4	44	0	A	E		
Blue Island, Illinois														
119th Street	12,240	4,365	8	~~7.0~~ 6.7	~~4.0~~ 4.4	3.4	194	2	82	0	A	D	2,050	S Kedzie Street
123rd Street	5,520	4,365	8	~~7.0~~ 6.7	~~4.0~~ 4.4	3.4	87	2	37	0	A	C		
127th Street	23,562	4,365	8	~~7.0~~ 6.7	~~4.0~~ 4.4	3.4	373	4	79	0	A	C		
Union Street	756	4,365	8	~~7.0~~ 6.7	~~4.0~~ 4.4	3.4	12	2	5	0	A	A		
Broadway Street	5,049	7,256	~~36~~ 10	~~2.8~~ 8.7	~~1.8~~ 5.7	14.9	~~146~~ 457	4	~~7~~ 22	~~0~~ 1	~~A~~ E	A		
Dixmoor, Illinois														
Western Avenue	8,568	7,256	29	~~3.0~~ 3.3	~~2.0~~ 2.2	14.9	296	4	14	0	A	A		
Robey Street	123	7,256	34	~~3.0~~ 2.9	~~2.0~~ 1.9	14.9	4	2	0	0	A	A		
Harvey, Illinois														
Lincoln Avenue	756	7,256	34	~~3.0~~ 2.9	~~2.0~~ 1.9	14.9	23	2	2	0	A	A		
147th Street/Sibley Boulevard (IL 83)	29,547	7,256	35	~~3.0~~ 2.9	~~2.0~~ 1.9	14.9	873	4	42	0	A	D		
Ashland Avenue	11,901	7,256	35	~~3.0~~ 2.9	~~2.0~~ 1.9	14.9	352	2	34	0	A	~~A~~ E		
Center Avenue	756	7,256	36	~~3.0~~ 2.8	~~2.0~~ 1.8	14.9	22	2	2	0	A	A		
Broadway Avenue	756	7,256	~~10~~ 36	~~8.7~~ 2.8	~~5.7~~ 1.8	14.9	~~68~~ 22	4	3	1	~~E~~ A	A		

Table 3.3-5. Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings														
Street	**2007 ADT**	**2007**									**Crossing LOS**	**Roadway LOS**	**Queue Length (Feet)**	**Blocked Major Intersection**
		L	**V**	**D_C**	**D_A**	**N**	**T_D**	**NL**	**Q**	**D_V**				
Halsted Street (IL 1)	18,831	5,927	36	~~2.0~~ 2.4	~~2.0~~ 1.5	19.5	605	4	22	0	A	C		
South Holland, Illinois														
Thornton-Blue Island Road	4,233	5,927	35	~~2.0~~ 2.4	~~2.0~~ 1.6	19.5	139	2	10	0	A	A		
Near Thornton, Illinois														
Thornton-Lansing Road	10,200	6,081	38	~~2.0~~ 2.3	~~2.0~~ 1.5	22.1	363	2	24	0	A	E		
Lansing, Illinois														
Volbrecht Road	3,108	6,081	38	2.3	1.5	22.1	111	2	7	0	A	A		
182nd Street/Ridge Road	7,969	6,081	39	~~2.0~~ 2.3	~~1.0~~ 1.5	22.1	278	2	18	0	A	~~A~~ C		
Lake County, Indiana (Elsdon/South ~~b~~Bend Subdivision)														
Munster, Indiana														
White Oak Avenue	8,733	6,081	38	~~2.0~~ 2.3	~~2.0~~ 1.5	22.1	311	2	20	0	A	D		
Griffith, Indiana														
Main Street	8,755	6,081	35	2.5	1.6	22.1	~~332~~ 329	2	~~22~~ 21	0	A	C		
Broad Street	15,450	6,081	36	2.4	1.6	22.1	574	2	37	0	A	E		
Colfax Street	11,162	6,081	40	~~2.0~~ 2.2	~~1.0~~ 1.4	~~23.0~~ 24.8	~~402~~ 428	2	25	0	A	E		
Near Merrillville, Indiana														
Hendricks Street	438	6,081	40	~~2.0~~ 2.2	~~1.0~~ 1.4	~~23.0~~ 24.8	~~16~~ 17	2	1	0	A	A		
Merrillville, Indiana														
Taft Street	24,056	6,081	40	2.2	1.4	~~23.3~~ 24.8	~~867~~ 923	2	54	0	A	F		
Madison Street	7,129	6,081	40	~~2.0~~ 2.2	~~1.0~~ 1.4	~~23.0~~ 24.8	~~257~~ 273	2	16	0	A	C		

Table 3.3-5. Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings														
Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length (Feet)	Blocked Major Intersection
		L	V	D_C	D_A	N	T_D	NL	Q	D_V				
Broadway Street	31,568	6,081	40	~~2.0~~ 2.2	~~1.0~~ 1.4	~~23.0~~ 24.8	~~1,138~~ 1,211	4	35	0	A	F		

Note:
[a] 51st Street is listed twice because there are two different USDOT crossing inventory numbers (283130C and 283129H).

Page 3.3-27, Table 3.3-8:

Table 3.3-8. 2007 LOS Summary of Roadways Crossing the EJ&E Rail~~way~~ Line						
LOS	Total	Lake (Illinois)	Cook (Illinois)	DuPage (Illinois)	Will (Illinois)	Lake (Indiana)
LOS A - B	~~55~~ 54	8	12	5	23	~~7~~ 6
LOS C - D	~~37~~ 38	11	5	3	14	~~4~~ 5
LOS E - F	20	7	3	4	2	4

Page 3.3-28, first bullet and first sub-bullet:

- ~~Six~~ One roadway~~s~~ ~~cross~~ crosses the EJ&E rail line at-grade.
    - Crossing~~s~~ operates at LOS D or better.

Page 3.3-28, fourth bullet:

- ~~Seven~~ Three roadways cross the EJ&E rail line at-grade.

Page 3.3-30, fifth bullet:

- Unacceptable mobility - Even with alternative routes to Ela Road, the queue lengths on Main Street block two major roadways, IL 22 and Church Street. See Chapter 4, Section 4.3.1.~~3~~ 2, Proposed Action, for a general discussion of cut-through traffic, and see Appendix E, Transportation Systems Analysis, for a more specific discussion of existing conditions of each community, including Lake Zurich.

- Page 3.3-37, fourth sub-bullet:
    - West 15th Avenue is a two-lane, undivided arterial that runs east-west crossing the EJ&E rail line, and connecting two arterials—Cline Avenue and Burt Street. 15th Avenue operates at LOS E-F.
    - West 9th Avenue is a two-lane, undivided collector street that runs east-west on the east side of Gary. ~~9th Avenue, which runs parallel to 15th Avenue within approximately 0.5 mile, is an alternate route that operates at LOS D or better.~~ It does not cross Cline Avenue on the west side of the highway/rail at-grade crossing but connects to a service road that runs parallel to Cline Avenue to eventually connect to West 15th Avenue. West 9th, West 5th, and West 25th Avenues operate at LOS D or better. West 5th has the highest ADT compared to the other three crossings.
    - ~~Alls other roadways operate at LOS D or better.~~

Page 3.3-50, first sub-bullet:

- ~~Lemont~~ Stephen Street is a two-lane collector that runs north-south, crossing the Joliet Subdivision within Lemont's center. ~~Lemont~~ Stephen Street operates at LOS E-F.

Page 3.3-50, third sub-bullet:

- ~~Stephen~~ Lemont Street is a two-lane collector that runs north-south, crossing the Joliet Subdivision within Lemont's center. ~~Stephen~~ Lemont Street operates at LOS D or better. ~~Stephen~~ Lemont Street crosses the Joliet Subdivision parallel to ~~Lemont~~ Stephen Street approximately 450 feet to the ~~east~~ west, and is a potential alternative to congested ~~Lemont~~ Stephen Street.

Page 3.3-50, eighth bullet:

- Unacceptable mobility because even with an alternative to ~~Lemont~~ Stephen Street, queue lengths block major roadways.

Page 3.3-55, first sub-bullet:

  - All the roadways but Ashland Avenue operate at LOS D or better. Ashland Avenue operates at LOS E-F.

Page 3.3-55, fourteenth bullet:

- Acceptable mobility because ~~all~~ most of the at-grade crossings operate at LOS D or better.

2.14.15 Emergency Response

Page 3.3-58, second sub-bullet:

  - Station No. 2 (Candlestick Way, ~~4 miles west~~ 3.5 miles northwest)

Page 3.3-59, sixth bullet:

- Libertyville Fire Department Station No. 3 (Atkinson Road in Libertyville, 1.5 miles southeast of Green Oaks, ~~0.75~~ 0.5 mile northwest of the EJ&E rail line)

Page 3.3-60, third sub-bullet:

  - Station No. 3 (Atkinson Road in Libertyville, 3.5 miles north of Mettawa, ~~0.75~~ 0.5 mile northwest of the EJ&E rail line)

Page 3.3-60, fourth bullet:

- Libertyville Police Department Headquarters (East Cook Avenue, ~~2~~ 2.5 miles north)

Page 3.3-60, eighth sub-bullet:

  - Station No. 3 (Atkinson Road, ~~0.75~~ 0.5 mile northwest)

Page 3.3-61, first bullet:

- Mundelein Police Department Headquarters (North Lake Street, 1.5 miles north of the EJ&E rail line, ~~0.5~~ 0.25 mile west of the CN Waukesha Subdivision)

Page 3.3-62, second sub-bullet:

  - Station No. 3 (Old McHenry Road, 0.5 mile south of Hawthorn Woods, ~~0.5 mile east~~ 0.25 mile west of the EJ&E rail line)

Page 3.3-62, eighth sub-bullet:

  - Station No. 3 (Old McHenry Road, ~~0.5 mile east~~ 0.25 mile west)

Page 3.3-62, sixth bullet:

- Emergency Medical Care—Advocate Good Shepherd Hospital (West Highway 22 in Barrington, 4 miles west of Lake Zurich, 3 miles ~~west~~ northwest of the EJ&E rail line)

Page 3.3-63, first sub-bullet:

  - Station No. 2 (West Algonquin Road in Barrington Hills, ~~almost directly on the EJ&E rail line~~ 900 feet west)

Page 3.3-63, third bullet:

- Barrington Hills Police Department Headquarters (Algonquin Road, ~~0.5 mile northwest~~ 700 feet west)

Page 3.3-63, third sub-bullet:

  - Station No. 2 West Algonquin Road in Barrington Hills, ~~almost directly on the EJ&E rail line~~ 900 feet west)

Page 3.3-63, fifth and sixth bullets:

  - Station No. 22 (Moon Lake Boulevard, ~~3~~ 3.5 miles east)
  - Station No. 23 (Westbury Drive, ~~3~~ 3.5 miles east)

Page 3.3-64, sixth, seventh, and ninth sub-bullets:

  - Headquarters/Station No. 1 (Summit Street, 2.5 miles ~~west~~ northwest)
  - Station No. 2 (Big Timber Road, ~~8.5 miles west~~ 4 miles northwest)
  - Station No. 4 (South MacLean Boulevard, ~~4.25~~ 4 miles west)

Page 3.3-64, seventeenth sub-bullet:

  - Future Station No. 3, scheduled to open in fall 2008 (West Bartlett Road, 0.5 mile east of the EJ&E rail line, 2 miles north of the CN rail line Freeport Subdivision)

Page 3.3-65, seventh sub-bullet:

  - Future Station No. 3, scheduled to open in fall 2008 (West Bartlett Road in Bartlett, 3 miles northeast of Wayne, 0.5 mile east of the EJ&E rail line, and 2 miles north of the CN rail line Freeport Subdivision)

Page 3.3-65, ninth sub-bullet:

  - Station No. 2 (Powis Road in West Chicago, 2.5 miles south of Wayne, ~~0.5~~ 0.25 mile west of the EJ&E rail line)

Page 3.3-66, second sub-bullet:

  - Station No. 2 (Powis Road, ~~0.5~~ 0.25 mile west)

Page 3.3-66, ninth sub-bullet:

  - Headquarters for Area 2 (North Root Street ~~4~~ 3.5 miles west)

Page 3.3-67, third sub-bullet:

  - Administrative Headquarters/Station No. 7 (Aurora Avenue, ~~2.5~~ 3 miles east)

Page 3.3-67, fourteenth sub-bullet:

  - Station No. 3 (West 119th Street, ~~0.5~~ 0.25 mile east)

Page 3.3-67, tenth bullet:

- Minooka Fire Protection District Headquarters (West Mondamin Street, ~~0.25 mile east~~ 200 feet east)

Page 3.3-68, fifth bullet:

- Crest Hill Police Department Headquarters (Plainfield Road, ~~1~~ 0.75 mile south)

Page 3.3-68, fifth and sixth sub-bullets:

- Station No. 5 (West Mason Avenue, ~~2 miles west~~ 1.5 miles southwest of the EJ&E rail line, 1 mile west of the CN Joliet Subdivision)
- Station No. 6 (West Oneida Street, ~~4 miles west~~ 3 miles south of the EJ&E rail line, 2.5 miles west of the CN Joliet Subdivision)

Page 3.3-69, fifth sub-bullet:

- Station No. 2 (East Zarley Boulevard, 1 mile southwest of the EJ&E rail line, ~~1~~ 0.5 mile southeast of the CN Joliet Subdivision)

Page 3.3-70, fourth sub-bullet:

- Future Station No. 4, scheduled to open in 2008 (Steger Road and 80th Avenue, 1.5 miles south)

Page 3.3-70, third bullet:

- Emergency Medical Care—Saint James Hospital and Health Centers–Olympia Fields (South Crawford Avenue in Olympia Fields, 8 miles east of Frankfort, 1 mile west of the CN Chicago Subdivision, and ~~1.5~~ 2 miles north of the EJ&E rail line)

Page 3.3-70, sixth sub-bullet:

- Station No. 2 (Central Avenue, 1 mile north of the EJ&E rail line, ~~3~~ 2.5 miles west of the CN Chicago Subdivision)

Page 3.3-70, sixth bullet:

- Emergency Medical Care—Saint James Hospital and Health Centers–Olympia Fields (South Crawford Avenue in Olympia Fields, 1 mile east of Matteson, 1 mile west of the CN Chicago Subdivision, and ~~1.5~~ 2 miles north of the EJ&E rail line)

Page 3.3-70, ninth bullet:

- Emergency Medical Care—Saint James Hospital and Health Centers–Olympia Fields (South Crawford Avenue in Olympia Fields, 2.5 miles northeast of Richton Park, 1 mile west of the CN Chicago Subdivision, and ~~1.5~~ 2 miles north of the EJ&E rail line)

Page 3.3-72, second sub-bullet:

- Community Hospital (MacArthur Boulevard in Munster, 3 miles northeast of Lynwood, 3.5 miles north of the EJ&E rail line, and ~~0.75~~ 0.5 mile north of the CN Elsdon/South Bend Subdivision)

Page 3.3-72, fifth sub-bullet:

- Community Hospital (MacArthur Boulevard in Munster, 4.5 miles northwest of Schererville, 3.5 miles north of the EJ&E rail line, and ~~0.75~~ 0.5 mile north of the CN Elsdon/South Bend Subdivision)

Page 3.3-73, first sub-bullet:

- Community Hospital (MacArthur Boulevard in Munster, 4.5 miles northwest of Griffith, 3.5 miles north of the EJ&E rail line, and ~~0.75~~ 0.5 mile north of the CN Elsdon/South Bend Subdivision)

Page 3.3-73, sixteenth sub-bullet:

- Station No. 14 (Industrial Highway, ~~0.25~~ 0.5 mile southeast)

Page 3.3-74, fourth bullet:

- Lake Ridge ~~Fire Protection District~~ Volunteer Fire Department Headquarters (West 47th Avenue, 2 miles east)

Page 3.3-74, eighteenth sub-bullet:

  - Methodist Hospital—Midlake Campus (West 25th Avenue, 3 miles east of the EJ&E rail line, ~~5~~ 4.5 miles north of the CN Elsdon/South Bend Subdivision)

Page 3.3-73, nineteenth sub-bullet:

  - Station No. 1 (South Calumet Avenue, ~~1.5~~ 4.5 miles west)

Page 3.3-74, second and third sub-bullets:

  - Station No. 6 (169th Street, 2 miles ~~southwest~~ west)
  - Station No. 7 (East 173rd Street, ~~2.5 miles southwest~~ 3.5 miles west)

Page 3.3-74, first bullet:

- Highland Fire Department South Station (West 45th Avenue, 2 miles west of the EJ&E rail line, 0.5 mile north of the CN Elsdon/South Bend Subdivision, 4 miles southeast of Hammond)
- Emergency Medical Care—Saint Margaret Mercy Hospital – Hammond Campus (Hohman Avenue, 4.5 miles southwest of EJ&E rail line segment No. 1, 5 miles west of EJ&E rail line segment No. 3)

Page 3.3-74, Heading 3.3.2.4.1:

East Chicago, ~~Illinois~~ Indiana

Page 3.3-74, second bullet:

- East Chicago Police Department Headquarters (East Columbus Drive, ~~1~~ 0.75 mile southwest)

Page 3.3-74, eighth sub-bullet:

  - Station No. 5 (West 151st Street, ~~1 mile west~~ 3 miles southwest)

Page 3.3-76, seventh and eleventh bullets:

- Des Plaines Police Department Headquarters (~~West 26th~~ Miner Street, ~~0.25~~ 0.5 mile east)
- Emergency Medical Care—Holy Family Medical Center (North River Road, ~~0.75~~ 0.5 mile east)

Page 3.3-77, second sub-bullet:

  - Station No. 1 (North River Road, ~~1~~ 0.75 mile east)

Page 3.3-77, fifth bullet:

- Emergency Medical Care—Gottlieb Memorial Hospital (West North Avenue in Melrose Park, 3 miles southeast of Schiller Park, 0.25 mile southwest of the CN Waukesha Subdivision, and ~~4 miles north~~ 3.5 miles northeast of the CN Freeport Subdivision)

Page 3.3-77, tenth sub-bullet:

- Gottlieb Memorial Hospital (West North Avenue in Melrose Park, 2 miles southeast of Franklin Park, 0.25 mile southwest of the CN Waukesha Subdivision, and ~~4 miles north~~ 3.5 miles northeast of the CN Freeport Subdivision)

Page 3.3-78, first sub-bullet:

- Gottlieb Memorial Hospital (West North Avenue in Melrose Park, 2 miles southeast of Franklin Park, 0.25 mile southwest of the CN Waukesha Subdivision, and ~~4 miles north~~ 3.5 miles northeast of the CN Freeport Subdivision)

Page 3.3-78, sixth sub-bullet:

- Gottlieb Memorial Hospital (West North Avenue in Melrose Park, 2 miles southeast of Franklin Park, 0.25 mile southwest of the CN Waukesha Subdivision, and ~~4 miles north~~ 3.5 miles northeast of the CN Freeport Subdivision)

Page 3.3-79, fifth sub-bullet:

- Station No. 3 (West Lies Road, ~~0.75~~ 1 mile south)

Page 3.3-80, first bullet:

- Glendale Heights Police Department Headquarters (East Fullerton Avenue, ~~0.75~~ 0.5 mile south)

Page 3.3-80, eighth sub-bullet:

- Station No. 1 (East Saint Charles Road, ~~2~~ 1.5 miles south)

Page 3.3-82, eighth bullet, eighth and ninth sub-bullets:

- North Riverside Police Department Headquarters (South Des Plaines Avenue, ~~0.25 mile~~ 300 feet south)
    - ~~North Riverside Fire Department Headquarters (South Des Plaines Avenue, 0.25 mile south)~~
    - ~~Emergency Medical Care~~
- North Riverside Fire Department Headquarters (South Des Plaines Avenue, 300 feet south)
- Emergency Medical Care

Page 3.3-83, seventh bullet:

- Cicero Police Department Headquarters (West 26th Street, ~~1~~ 0.75 mile north)

Page 3.3-83, tenth bullet, page 3.3-84, first and second bullets:

- Lockport Police Department Headquarters (South Farrell Road, 3.5 miles northeast of EJ&E rail line segment No. 8, 2.5 miles east of EJ&E rail line segment No. 18, and ~~2~~ 1.5 miles east of the CN Joliet Subdivision)
- Illinois State Police District No. 5 (Broadway Street, ~~2~~ 1.5 miles northeast of EJ&E rail line segment No. 9, 500 feet west of EJ&E rail line segment No. 18, and 1 mile west of the CN Joliet Subdivision)
- Lockport Township Fire Protection District Headquarters/Station No. 1 (East 9th Street, 3 miles northeast of EJ&E rail line segment No. 8, 1.5 miles east of EJ&E rail line segment No. 18, and ~~2 miles~~ 0.75 mile east of the CN Joliet Subdivision)

Page 3.3-84, seventh sub-bullet:

- Station No. 2 (Enterprise Drive, ~~2.5~~ 3 miles north of EJ&E rail line segment No. 18, 7.5 miles north of EJ&E rail line segment No. 9, and 2 miles northwest of the CN Joliet Subdivision)

Page 3.3-84, seventh bullet:

- Lockport Township Fire Protection District Station No. 3 (North Weber Road, 4 miles northeast of EJ&E rail line segment No. 9, ~~3.5~~ 3 miles northwest of EJ&E rail line segment No. 18, and ~~3.5~~ 4 miles west of the CN Joliet Subdivision)

Page 3.3-85, sixth sub-bullet:

- Palos Community Hospital (South 80th Avenue in Palos Heights, ~~5~~ 5.5 miles southeast of Willow Springs, 5 miles southeast of the CN Joliet Subdivision)

Page 3.3-85, seventh bullet:

- Justice Police Department Headquarters (South Archer Road, ~~0.75~~ 0.5 mile southeast)

Page 3.3-85, eighth sub-bullet:

- Station No. 2 (South Archer Road, ~~0.75~~ 0.5 mile southeast)

Page 3.3-85, tenth sub-bullet:

- Palos Community Hospital (South 80th Avenue in Palos Heights, 5.5 miles south of Justice, ~~5~~ 5.5 miles southeast of the CN Joliet Subdivision)

Page 3.3-86, first and second bullets, first and second sub-bullets:

- Bedford Park Police Department Headquarters (South Archer Avenue, 0.75 mile ~~east~~ southeast)
- Bedford Park Fire Department
  - Headquarters/Station No. 1 (South Archer Road, ~~0.25 mile east~~ 0.75 mile southeast)
  - Station No. 2 (South Central Avenue, ~~3.5 miles east~~ 2.5 miles southeast)

Page 3.3-87, second sub-bullet:

- Saint James Hospital and Health Centers–Olympia Fields (South Crawford Avenue in Olympia Fields, 6.5 miles northeast of Monee, 1 mile west of the CN Chicago Subdivision, and ~~1.5~~ 2 miles north of the EJ&E rail line)

Page 3.3-87, sixth bullet:

- Emergency Medical Care—Saint James Hospital and Health Centers–Chicago Heights (Chicago Road in Chicago Heights, 4.5 miles northeast of University Park, 0.75 mile north of the EJ&E rail line, and 3 miles east of the CN Chicago Subdivision)
- Saint James Hospital and Health Centers–Olympia Fields (South Crawford Avenue in Olympia Fields, 6.5 miles northeast of Monee, 1 mile west of the CN Chicago Subdivision, 2 miles north of the EJ&E rail line, and 5.5 miles north of University Park)

Page 3.3-87, fourth sub-bullet and ninth bullet:

- Station No. 2 (Central Avenue in Matteson, 2 miles west of Olympia Fields, 1 mile north of the EJ&E rail line, and ~~3~~ 2.5 miles west of the CN Chicago Subdivision)

- Emergency Medical Care—Saint James Hospital and Health Centers–Olympia Fields (South Crawford Avenue, 1 mile west of the CN Chicago Subdivision and 2 miles north of the EJ&E rail line)

Page 3.3-88, first sub-bullet:

  - Saint James Hospital and Health Centers–Olympia Fields (South Crawford Avenue in Olympia Fields, 6.5 miles northeast of Monee, 1 mile west of the CN Chicago Subdivision, and ~~1.5~~ 2 miles north of the EJ&E rail line)

Page 3.3-89, second sub-bullet:

  - Fire Station No. 4 (Lathrop Avenue, ~~0.5~~ 0.75 mile southeast of the CN Chicago Subdivision, 1.5 miles southwest of the CN Elsdon/South Bend Subdivision)

Page 3.3-89, second and third bullets:

- Phoenix Police Department Headquarters (East 151st Street, ~~0.25~~ 0.5 mile east of the CN Chicago Subdivision, 0.5 mile northeast of the CN Elsdon/South Bend Subdivision)
- Phoenix Fire Department Headquarters (East 151st Street, ~~0.25~~ 0.5 mile east of the CN Chicago Subdivision, 0.5 mile northeast of the CN Elsdon/South Bend Subdivision)

Page 3.3-89, fifth and sixth bullets, first sub-bullet:

- Dolton Police Department Headquarters (Park Avenue, ~~1~~ 0.75 mile east)
- Dolton Fire Department
  - Headquarters/Station No. 1 (Park Avenue, ~~1~~ 0.75 mile east)

Page 3.3-90, Heading 3.3.2.9.1:

Highland, ~~Illinois~~ Indiana

Page 3.3-90, sixth sub-bullet:

  - Methodist Hospital—Midlake Campus (West 25th Avenue in Gary, 5 miles east of Highland, 3 miles east of the EJ&E rail line, and ~~5~~ 4.5 miles north of the CN Elsdon/South Bend Subdivision)

Page 3.3-90, eighth sub-bullet:

  - Station No. 2 (Fisher Street, ~~1~~ 0.5 mile north)

Page 3.3-90, sixth bullet:

- Emergency Medical Care—Community Hospital (MacArthur Boulevard in Munster, 3.5 miles north of the EJ&E rail line, ~~0.75~~ 0.5 mile north of the CN Elsdon/South Bend Subdivision)

Page 3.3-91, first bullet:

- Emergency Medical Care—Community Hospital (MacArthur Boulevard in Munster, 2 miles southeast of Lansing, 3.5 miles north of the EJ&E rail line, and ~~0.75~~ 0.5 mile north of the CN Elsdon/South Bend Subdivision)

Page 3.3-91, eighth and ninth bullets:

- Dixmoor Police Department Headquarters (West 145th Street, 200 feet ~~southeast~~ southwest of the CN Elsdon/South Bend Subdivision 1.5 miles northwest of the CN Chicago Subdivision)

- Dixmoor Fire Department Headquarters (West 145th Street, 200 feet ~~southeast~~ southwest of the CN Elsdon/South Bend Subdivision, 1.5 miles northwest of the CN Chicago Subdivision)

2.14.16 Land Use

Page 3.5-14, second paragraph, fourth sentence:

The existing land use at and surrounding the site is classified as a utility corridor (Village of Mundelein 2001 and Village of Vernon Hills 2003).

Page 3.5-16, third paragraph:

East Siding to West Wolf's Road. A portion of the proposed East Siding double track would be constructed on EJ&E segment 10B located in northern Will County, just south of 87th Street. ~~On the east side of the EJ&E rail line, land use is industrial until 91st Street, where the west side of the rail line is residential, followed by vacant land. South of 91st Street along both sides of the rail line is open space and agricultural uses. South of West Wolfs Road, transportation, communication, and utility land uses surround the rail line on the west side; vacant and agricultural uses exist on the east side.~~ On the west side of the EJ&E rail line in Aurora, the land is designated as open space and residential, according to the City of Aurora's *1984 Comprehensive Plan's General Land Use Interim Plan*. According to the City of Naperville's *Existing Land Use Map* (dated January 2007), land along the east side of the EJ&E rail line is designated as Warehouse/Distribution and Manufacturing until 91st Street. The land from 91st Street to just south of W Wolfs Road is designated as vacant (undeveloped) and transportation utilities.

Page 3.5-23, first paragraph:

Joliet Connection Construction Site

Neither Joliet nor Lockport classifies the proposed Joliet connection site on their zoning map or comprehensive plan map, respectively (City of Joliet 2005; City of Lockport 2006). The Joliet Planning District Boundary (District 3) is separated by the EJ&E rail line and only includes the area to the south. The Lockport Comprehensive Plan states that the land along stream corridors is intended to remain undeveloped and that natural landforms that currently exist be maintained (City of Lockport 1997). This would include the land west of the site. Will County has classified the proposed Joliet connection site as either industrial or commercial (Will County 2007).

Page 3.5-35, Table 3.5-2:

Table 3.5-2. Forest Preserves Adjacent to the EJ&E Rail Line

County	Forest Preserve	Size (Acres)	Location	Ownership[a]
Illinois				
Lake	Middlefork Savanna	576	Southeast Lake County near Lake Forest	LCFPD
	Old School	380	Central Lake County near Libertyville	
	MacArthur Woods	446	Central Lake County near Mettawa	
	Cuba Marsh	792	Southwest Lake County near Barrington	
Cook	~~Cuba Marsh~~	~~792~~	~~Southwest Lake County near Barrington~~	FPDCC
	Spring Creek Valley	4,000	Northwest Cook County near Barrington	

Table 3.5-2. Forest Preserves Adjacent to the EJ&E Rail Line				
County	**Forest Preserve**	**Size (Acres)**	**Location**	**Ownership[a]**
	Arthur L. Janura	4,230	Northwest Cook County near Hoffman Estates	
	Shoe Factory Woods (Poplar Creek)	600	Northwest Cook County near Hoffman Estates	
	Sauk Trail Woods	640	South central Cook County near Chicago Heights and Park Forest	
	Indian Hill Woods	50	South central Cook County near Chicago Heights and Park Forest	
DuPage	Pratt's Wayne Woods	3,800	Northwest DuPage County in Bartlett	FPDDC
	Dunham	378	Unincorporated northwest DuPage County near Wayne	~~City of West Chicago and~~ FPDDC
	West Chicago Prairie	316	West central DuPage County near West Chicago	West Chicago and FPDDC
	Blackwell	1,200	West central DuPage County near Warrenville	FPDDC
	Night Heron Marsh	109	Southwest DuPage County in Aurora	
Will	Weisbrook	16	Northern Will County near Naperville, East of the EJ&E rail line	FPDWC
	Lake Renwick Heron Rookery	250	South central Will County north of Lockport and Joliet	
	Alessio Prairie	13	Central Will County in Crest Hill	
	Kraske	4	Central Will County in Crest Hill	
	Walnut Hollow	205	Central Will County in Joliet	
	Sugar Creek	295	Central Will County east of Joliet	
Indiana				
Lake	~~No forest preserves are located near the EJ&E rail line in Lake County, Indiana.~~ Indiana uses a County Park system, rather than a Forest Preserve District system as Illinois uses; therefore, no forest preserves are located near the EJ&E Rail line in Indiana.			

Note:
[a] LCFPD = Lake County Forest Preserve District
FPDCC = Forest Preserve District of Cook County
FPDDC = Forest Preserve District of DuPage County
FPDWC = Forest Preserve District of Will County

Pages 3.5-36 and -37, Table 3.5-3:

Table 3.5-3. Nature Preserves Adjacent to the EJ&E Rail Line				
County	**Nature Preserve**	**Size (Acres)**	**Location/Proximity to Rail Line**	**Ownership[a]**
Illinois				
Lake	MacArthur Woods	446	Vernon Hills/ South of the EJ&E rail line	LCFPD

Table 3.5-3. Nature Preserves Adjacent to the EJ&E Rail Line				
County	**Nature Preserve**	**Size (Acres)**	**Location/Proximity to Rail Line**	**Ownership[a]**
	Middlefork Savanna	603	South of Green Oaks/ South of EJ&E rail line south of the Knollwood Country Club	LCFPD
Cook	Shoe Factory Road Prairie	13	Northwest Cook County near Hoffman Estates/ East of the EJ&E rail line along the south side of Shoe Factory Road.	FPDCC
	Spring Lake	531	Northwest Cook County, near Barrington Hills/ West the EJ&E rail line, just south of the CN rail line	FPDCC
DuPage	Truitt-Hoff	~~120~~ 290 *(includes Preserve's buffer)*	West central DuPage County near West Chicago, part of the West Chicago Prairie Forest Preserve west of the EJ&E rail line	City of West Chicago and FPDDC
Kane	Brewster Creek Fen	9	East central Kane County near Wayne and Bartlett	INPC
Will	Vermont Cemetery Prairie	1	North Will County, near Naperville, south of Wolf's Crossing Road and east of the EJ&E rail line	FPDWC
	Lake Renwick Heron Rookery	320	North Will County, near Plainfield/ EJ&E rail line cuts through the Nature Preserve	IDNR and FPDWC
	Old Plank Road Prairie	13	Near Route 30, approximately 1 mile west of Wolf Road, in Mokena, North of the EJ&E rail line	FPDWC
Indiana				
Lake	Hoosier Prairie	~~430~~ 600	Western half of the EJ&E and CN crossing diamond at the proposed Griffith connection in Griffith	INDNR - Division of Nature Preserves
	Ivanhoe Dune and Swale	120	Central Gary ~~West~~ East of the EJ&E rail line	The Nature Conservancy as part of the Tolleston Strand Plain.
	Clark & Pine	42	Northeast of the Gary-Chicago Airport/ West of Clark Street across from Pine Station Nature Preserve; North and	INDNR - Division of Nature Preserves, 15 acres privately owned

Table 3.5-3. Nature Preserves Adjacent to the EJ&E Rail Line				
County	**Nature Preserve**	**Size (Acres)**	**Location/Proximity to Rail Line**	**Ownership[a]**
			South of EJ&E segment 1	
	Pine Station	259	East side of Clark Street, just south of Kirk Yard	INDNR - Division of Nature Preserves
	Ivanhoe South[b]	65	East side of the EJ&E rail line, south of 5th Avenue	Privately owned (approx. 55 acres), Shirley Heinze Environmental Fund (approx. 10 acres)

Page 3.5-37, first paragraph, first sentence:

A wide variety of state-owned and administered resource-rich areas and protected areas exist in each of the ~~five~~ four counties in Illinois.

Pages 3.5-38 and -39, Table 3.5-4 (This is only a portion of the table):

Table 3.5-4. Resource-Rich and Protected Areas Adjacent to the EJ&E Rail Line					
County	**Name**	**Size (Acres)**	**Location**	**Proximity To Rail Line**	**Details/Features**
Indiana					
Lake	~~No protected areas are located near the EJ&E rail line in Lake County, Indiana.~~ Indiana does not use this terminology to designate areas needed protection as Illinois uses, therefore, no protected areas are located near the EJ&E rail line in Lake County, Indiana.				

Page 3.5-45, Table 3.5-9:

Table 3.5-9. Trails, Greenways, and Scenic Corridors in Lake County, Indiana				
Name	**Type/Status**	**Location**	**Proximity To Rail Line**	**Managed by**
Pennsy Greenway Trail	Greenway (proposed in Indiana; existing in Illinois)	Extending northwest from Crown Point into Illinois	Crosses the EJ&E rail line at US 41 near Schererville	NIRPC, Illiana Citizens for the Pennsy, Calumet Citizens for Connecting Communities (C4)
Erie Lackawanna	Regional Trail (existing)	From Crown Point northwest to Highland, IN	Runs parallel to the EJ&E rail line near Highland; runs northwest/southeast through the Griffith connection	Highland Parks & Rec,, Griffith Parks & Rec, Lake County Parks & Rec, Merrillville Parks & Rec, C4
Little Calumet River Trail Corridor	Scenic Corridor (under construction)	Along the Little Calumet River from the Erie Lackawanna Trail Corridor	Crosses the EJ&E line just south of I-80/94	~~NIRPC~~ Little Calumet River Basin Development Commission
Grand Calumet River	Regional Trail (~~existing~~ proposed)	Along the Grand Calumet River eastward from north Hammond to downtown Gary	East of the EJ&E rail line and the Gary-Chicago Airport, north and south of I-90	~~NIRPC~~ Unknown at this time
Marquette ~~Corridor~~ Trail	Regional Trail (segments	~~Extends from the Indiana-Illinois border to~~	~~North~~ Northeast of the EJ&E rail	~~NIRPC~~ Indiana Dunes National

	existing and proposed)	~~the Indiana-Ohio border near the coast line, crossing through Gary~~ Vicinity of Whihala Beach County Park in Whiting	line	Lakeshore (INDU)
Oak Savannah Bike/Hike Trail	Regional Trail (existing)	Extends from Griffith to Hobart and Hobart to Lake/Porter County Line	Follows ~~the EJ&E~~ an abandoned rail line corridor	~~NIRPC~~ Lake County Parks & Recreation
Prairie Duneland Trail	Regional Trail (existing)	Extends between ~~Portage~~ Hobart and Chesterton	Follows ~~the EJ&E~~ an abandoned rail line corridor	~~NIRPC~~ Portage Parks and Recreation

Pages 3.5-45 through -47, Table 3.5-10:

Table 3.5-10. Local Parks Near the EJ&E Rail Line

County	Name	Size (Acres)	Location	Proximity To Rail Line
Illinois				
Lake	Hawthorn Woods Community Park	Not Available	North of Old McHenry Road in Hawthorn Woods	East
	Century Park	96.0	West of South Milwaukee Avenue in Vernon Hills	South
	Lions Park	4.7	East of South Old Rand Road in Lake Zurich	North
	Citizens Park	55.0	East of US 14 in Barrington	Southeast
	Langendorf Park	39.6	West of Illinois Route 59 in Barrington	North
Cook (Northwest)	Cannon Crossing	26.3	South of Shoe Factory Road in Hoffman Estates	West
DuPage	Reed-Keppler Park	104.7	West of Illinois Route 59 in West Chicago	East
	Pioneer Park	32.4	North of West Roosevelt Road in West Chicago	West
	Summer Lakes Park	13.2	North of Illinois Route 56 in Warrenville	East
	Frontenac Park	67.0	South of New York Street in Aurora	East
	Clearwood Park	56.7	South of Ogden Avenue in Aurora	West, north of Middlebury East Park
	Andover Park	Not Available	South of 83rd Street in Aurora	West
	Middlebury East Park	Not Available	North of 83rd Street in Aurora	West, south of Clearwood Park
	Waubonsee Creek Park	Not Available	South of McCoy Drive in Aurora	West
	McCarty Park	Not Available	North of /Ogden Ave in Aurora	West
	South Spring Lake	Not Available	North of Ogden Ave in Aurora	East
	Oakhurst Wetlands	Not Available	South of New York Street	West
Will	West Side Park	Not Available	North of 9th Street in Lockport	East
	Crest Hill Memorial Park	Not	East of Weber Road in Crest	South

Table 3.5-10. Local Parks Near the EJ&E Rail Line				
County	Name	Size (Acres)	Location	Proximity To Rail Line
		Available	Hill	
	Heggie Park	40.0	South of East Woodruff Road in Joliet	West
	A.F. Hill Park	20.0	East of State Street, south of Princeton Street in Lockport	East
	Harbor Springs Park	Not Available	West of Middlebury Street, South of 87th Street	West
	King's Crossing	1.6	South of 127th Street	East
	Future Park (Under Development)	2.3	North of 127th Street	West
	Vine Street Park	2.0	Vine Street and 7th Street in Lockport	East
	Dellwood West	176.0	South Canal Road in Lockport	West
	Richland Park	27.5	Caton Farm Road, east of Weber Road in Crest Hill	West
	Ron Rob Field	4.6	County Creek Dr in New Lenox	South
Cook (Southeast)	Algonquin Park	9.9	East of Western Avenue in Park Forest	South
	Euclid Park	17.7	West of Euclid Avenue in Chicago Heights	North
	Petraca Park	1.9	North of East 22nd Street in Chicago Heights	North and south
	Winnebago Park	Not available	South of Waldman Drive, north of Westgate Drive	South
Indiana				
Lake	Griffith Historical Society Railroad Depot and Museum	Not available	Broad Street and Avenue A in Griffith	North
	Cheever Memorial Park	16.4	North of East Elm Street in Griffith	East
	Seberger Park	8.1	North of I-80/I-94 in Gary	East
	Jackson Park	4.4	East of Buchanan Street, south of Kirk Yard in Gary	East
	Oak Ridge Prairie County Park	253.0	Northwest Lake County in Griffith	East
	Tot Park	1.2	North of Lake Street in Griffith	West

Pages 3.5-47 through -49, Table 3.5-11:

Table 3.5-11. Land and Water Conservation Fund Properties				
County	Site	Type	Proximity to EJ&E Rail Line	Grant Sponsor
Illinois				
Lake	Macarthur Woods Forest and Nature Preserves	Acquisition	Located in Vernon Hills/ South of the EJ&E rail line	LCFPD
	Hawthorn Woods	Acquisition, Development	North of Old McHenry	Village of

Table 3.5-11. Land and Water Conservation Fund Properties				
County	**Site**	**Type**	**Proximity to EJ&E Rail Line**	**Grant Sponsor**
			Road in Hawthorn Woods	Hawthorn Woods
	Old School Forest Preserve	Development	Central Lake County near Libertyville, adjacent to the EJ&E rail line	LCFPD
	Hawthorn Woods Park Acquisition	Acquisition	Within Hawthorn Woods	Village of Hawthorn Woods
	Hawthorn Woods Park Development	Development	Within Hawthorn Woods	Village of Hawthorn Woods
	Hawthorn Woods Development	Combination[a]	Within Hawthorn Woods	Village of Hawthorn Woods
	Des Plaines River Trail	Development	Runs parallel to the west side of the EJ&E rail line just west of I-294, crosses at West Old School Road, runs parallel east of the EJ&E rail line until it reaches Illinois Route 41	LCFPD
	Greenbelt Forest Preserve (Grant & Greenbelt Picnic Development)	Development	Eastern Lake County, near Waukegan and North Chicago	LCFPD
Cook (NW)	Spring Lake Nature Preserve Addition	Acquisition	Northwest Cook County, near Barrington Hills/ West the EJ&E rail line, south of the CN rail line	FPDCC
	Poplar Creek Forest Preserve (Addition)	Acquisition	East side of the EJ&E rail line near Hoffman Estates	FPDCC
	~~Pratt's Wayne Woods Forest Preserve~~	~~Acquisition~~	~~East and west of the EJ&E rail line in Bartlett~~	~~DuPage County~~
	~~West Chicago Prairie Nature Preserve~~	~~Acquisition~~	~~West central DuPage County near West Chicago, west of the EJ&E rail line~~	~~City of West Chicago~~
DuPage	Pratt's Wayne Woods Forest Preserve	Acquisition	East and west of the EJ&E rail line in Bartlett	DuPage County
	West Chicago Prairie Nature Preserve	Acquisition	West central DuPage County near West Chicago, west of the EJ&E rail line	City of West Chicago
	DuPage River (Park Land)	Acquisition	East of the EJ&E rail line, east of Illinois Route 59 in Naperville	City of Naperville
	~~Hickory Creek Forest Preserve~~	~~Acquisition~~	~~Southeastern Will County near Frankfort, New Lenox, and Mokena~~	~~Will County~~
Will	Hickory Creek Forest Preserve	Acquisition	Southeastern Will County near Frankfort, New	Will County

Table 3.5-11. Land and Water Conservation Fund Properties				
County	**Site**	**Type**	**Proximity to EJ&E Rail Line**	**Grant Sponsor**
			Lenox, and Mokena	
	Statewide Local Agency Development	Development	Various areas within Channahon	Channahon Community Park District
	I & M Canal Trail System	Development	North end of Joliet and south side of Lockport, west of the CN rail line	Lockport Park District / Illinois Department of Conservancy
	Lake Renwick Heron Rookery Forest and Nature Preserves	Acquisition	South central Will County north of Lockport and Joliet	Will County / Illinois Department of Conservancy
	EJ&E Trail	Acquisition	Parallel to the EJ&E rail line	Fox Valley Park District
	Summerlakes Park	Combination	East of the EJ&E rail line	Warrenville Park District
Indiana				
Lake	Gibson Woods Nature Preserve	Combination	Near Hammond/ West of the EJ&E rail line	Lake County Park Board
	Edward C. Dowling Park	Development	West of EJ&E rail line in Hammond	Hammond Park Board
	Tolleston Park Swimming Pool	Development	East of EJ&E rail line in Tolleston	Gary Park Board
	Washington Park Swimming Pool	Development	East of EJ&E rail line in Gary	Gary Park Board
	Homestead Park	Development	West of EJ&E rail line in Highland	Highland Park Board
	Southridge Park	Acquisition	East of the EJ&E rail line in Griffith, east of Cheever Park	Highland Park Board
	Wadsworth Park	Acquisition/Development	West of the EJ&E rail line in Highland	Griffith Park Board
	Ellendale Park	Development	West of EJ&E rail line in Highland	Highland Park Board
	Sheppard Park	Development	West of EJ&E rail line in Highland	Highland Park Board
	Northgate Park	Combination	Northwest of EJ&E rail line in Dyer	Dyer Park Board
	Meadows Park	Acquisition	West of EJ&E rail line in Highland	Highland Park Board
	Sunnyside Park	Development	Southwest of EJ&E rail line in East Chicago	East Chicago Park Board
	Howe Park	Development	East of EJ&E rail line in Glen Park	Gary Park Board
	Dowling Park Tennis Court Lighting	Development	West of EJ&E rail line in Hammond	Hammond Park Board
	Harrison Park Tennis Court Lighting	Development	1.5 miles South of EJ&E rail line in Hammond	Hammond Park Board

Table 3.5-11. Land and Water Conservation Fund Properties				
County	Site	Type	Proximity to EJ&E Rail Line	Grant Sponsor
	Maywood Park Annex	Development	1.5 miles South of EJ&E rail line in Hammond	Hammond Park Board
	Hoosier Prairie State Nature Preserve	Acquisition	North of the EJ&E rail line at the proposed Griffith connection in Griffith	Owned by Division of Nature Preserves
	Clarke and Pine Nature Preserve	Acquisition	South of the EJ&E rail line in Gary	Owned by Division of Nature Preserves

Source: NPS (2008a), "Project List by County and Summary Reports," *Land and Water Conservation Fund*, retrieved on March 26, 2008 and June 17, 2008, http://waso-lwcf.ncrc.nps.gov/public/index.cfm, 2008, Correspondence with the Indiana Department of Natural Resources, Division of Outdoor Recreation, October 23, 2008.

Note:

[a] Combination grants allow for acquisition and site development.

Page 3.5-49, first paragraph, third sentence:

Table 3.5-12, below, shows ~~seven~~ several land and water reserves are located near the EJ&E rail line within the four Illinois counties, while no natural heritage landmarks exist.

Page 3.5-50, Table 3.5-12:

Table 3.5-12. Land and Water Reserves ~~in Illinois~~ adjacent to the EJ&E Rail Line					
County	Reserve Name	Size (Acres)	Location	Proximity to EJ&E Rail Line	Ownership
Lake	Jean Farwell Woods	14	Between Lake Bluff & Libertyville	South of the EJ&E rail line, within Middlefork Savanna Nature Preserve	Frank Farwell
DuPage	Tri-County Wetland	33	Bartlett	Northwest of the Munger Connection, located in the Northwest portion of James "Pate" Philip State Park	~~FPDCC / Bartlett Park District~~ IDNR
Will	Lake Renwick East	159	Plainfield	Surrounding the EJ&E rail line, adjacent to the Lake Renwick Heron Rookery Nature Preserve	FPDWC
Cook (Southeast)	Butterfield Creek Headwaters	89	Matteson	West of the Matteson Connection, South of I-57 & U.S. Route 30 Interchange, South of the Old Plank Road Prairie Nature Preserve	Village of Matteson

Page 3.5-50, second paragraph:

Illinois has a draft program document which is currently being reviewed internally by the IEPA and the IDNR. NOAA will conduct a public hearing on the program document. Approval of the Illinois Coastal Management Program (ICMP) is not expected for another year (2009).~~is anticipated to have a program adopted in 2008.~~ The Illinois coastal zone boundary is a distinct line that defines the

perimeter of the land and water area that is within the limits of the Illinois Coastal Management Program (ICMP). Defining the coastal zone boundary for Illinois requires delineation of a boundary that extends across the open-water area of Michigan (the lakeward boundary) and a boundary on land that defines the most landward extent of the coastal zone (inland boundary).

Indiana adopted a program in 2002. Figure 3.5-21, below, illustrates the boundaries of Indiana's coastal zone. The purpose of Indiana's Lake Michigan Coastal Program is to enhance the state's role in planning for and managing natural and cultural resources in the coastal region and to support partnerships among Federal, state, and local agencies and organizations. The Indiana Lake Michigan Coastal Program (LMCP) relies upon existing laws and programs as the basis for achieving its purpose (INDNR 2004a).

2.14.17 Socioeconomics

Page 3.6-1, fifth paragraph, fifth sentence:

~~The population bars are intended to show the relative size of each city and are not to scale.~~

Page 3.6-5, Table 3.6-1:

Table 3.6-1. Rapid Population Growth Illinois Communities 2000-2030

City	Average Annual Population Growth (%)	30-Year Growth Rate (%)
Frankfort~~,~~	14.5	436
New Lenox	13.6	410
Plainfield	13.4	404
Richton Park	6.4	192
Matteson	6.2	187
Hawthorn Woods	5.5	165
Lockport	4.6	138
Wayne	4.0	122
Lynwood	3.7	112
Romeoville	3.5	107

Source: NIPC, *Northeastern Illinois Planning Commission 2030 Forecasts of Population, Households and Employment by County and Municipality*, available online at http://www.cmap.illinois.gov/2030_forecasts.aspx, September 27, 2006.

2.14.18 Environmental Justice

Page 3.7-3, Table 3.7-3:

Table 3.7-3. Minority and Low-Income Census Block Groups Along CN Rail Line Segments Within the EJ&E Arc

CN Rail Line	County	Total Census Block Groups	Minority Census Block Groups	Low-Income Census Block Groups
Illinois				
~~Wisconsin Central~~ ~~(~~Waukesha Subdivision~~)~~	Cook	39	6	0
~~Wisconsin Central~~ ~~(~~Waukesha Subdivision~~)~~	Lake	18	2	0
~~Illinois Central~~ ~~(~~Chicago Subdivision~~)~~	Cook	11	6	2
~~Grand Trunk Western~~ ~~(~~Elsdon/South Bend	Cook	33	21	6

Subdivision~~)~~				
Indiana				
~~Grand Trunk Western (~~South Bend Subdivision~~)~~	Lake	12	0	0

Source: U.S. Census Bureau, Census 2000; Summary File 1 and Summary File 3, *Data Sets*, retrieved on February 15, 2008, http://factfinder.census.gov/servlet/DatasetMainPageServ.et?_program=DEC&_submenuId=datasets_0&lang=en, 2000.

2.14.19 Energy

Page 3.8-1, fifth paragraph, second sentence:

As shown in Table 3.8-1, below, CN estimates that it currently uses 15,613 U.S. gallons of diesel fuel per day in the Chicago metropolitan area, including fuel for CN trains traveling on the EJ&E rail line and on CN and other rail lines.

2.14.20 Air Quality and Climate

Page 3.9-5, fifth paragraph, third and fourth sentences and Page 3.9-6, first paragraph, first sentence:

Based on data listed in the NPR for the 2004 to 2006 period, ~~three~~ four counties in the Study Area had monitored values greater than the new 8-hour ozone NAAQS. These ~~three~~ four counties are Lake County and Cook County, Illinois, and Lake County and Porter County, Indiana, all with monitored values of ~~0.076, 0.077, and~~ 0.076 ppm~~, respectively~~. In Illinois, ~~Cook~~, DuPage, Will, McHenry, and Kane counties all had 2004 to 2006 monitored values equal to or less than the new NAAQS, with values of ~~0.075,~~ 0.068, ~~0.071~~ 0.070, 0.070, and ~~0.072~~ 0.071 ppm, respectively.

2.14.21 Noise and Vibration

Page 3.10-4, Table 3.10-2(This is only a portion of the table):

Table 3.10-2. 24-Hour Noise Monitoring Locations and Existing Noise Levels

Rail Line Segment	Monitoring Site	Monitoring Location (See Figure 3.10-1)	Ldn (dBA)
EJ&E-7D/E	J18	~~420 Aberdeen Road~~ Residence on the corner of Aberdeen and South Harlem Avenue(Frankfort, IL)	56
EJ&E-14C	J5	22 ~~437~~ Elm Place (Lake Zurich)	71

Page 3.10-5, third paragraph, seventh sentence:

Kirk Yard is ~~situated between the shore of Lake Michigan to the north, the US Steel Gary Works to the east, an interstate highway to the south, and rail lines to the west~~ located less than one mile south of Lake Michigan; it is bounded to the north and east by U.S. Steel Gary Works, to the south by I-90, and to the west by rail lines.

2.14.22 Biological Resources

Page 3.11-7, Table 3.11-1:

Table 3.11-1. Invasive and Nonnative Plant Species			
Common and Scientific Names			
Garlic mustard *Alliaria petiolata*	Black locust *Robinia pseudoacacia*	Reed canary grass *Phalaris arundinacea*	Yellow sweet clover *M. officinalis*
Teasel *Dipsacus fullonum* L.	Crown vetch *Coronilla varia*	Narrow-leaved cattail *Typha angustifolia*	~~Giant~~ Common reed grass *Phragmites australis*
Canada thistle *Cirsium arvense*	Moneywort *Lysimachia nummularia*	Autumn olive *Elaeagnus umbellate*	Glossy buckthorn *Rhamnus frangula*
Tartarian honeysuckle *Lonicera tatarica*	White sweet clover *Melilotus alba*	Leafy spurge *Euphorbia esula*	Common buckthorn *R. cathartica*
Purple loosestrife *Lythrum salicaria*	Oriental bittersweet *Celastrus orbiculatus*	Multiflora rose *Rosa multiflora*	Spotted knapweed *Centaurea maculosa*

Source: CW, *The State of Our Chicago Wilderness: A Report Card on the Health of the Region's Ecosystems*, Chicago, IL, available online at http://www.chicagowilderness.org/pubprod/miscpdf/CW_Report_Card_Technical.pdf, 2006.

Page 3.11-9, Table 3.11-2:

Table 3.11-2. ~~Common~~ Wildlife Species in the Study Area			
Common and Scientific Names			
Mammals			
Masked shrew *Sorex cinereus*	Eastern cottontail *Sylvilagus floridanus*	Muskrat *Ondatra zibethicus*	Beaver *Castor canadensis*
Eastern mole *Scalopus aquaticus*	Badger *Taxidea taxus*	Gray squirrel *Sciurus carolinensis*	Coyote *Canis latrans*
Little brown bat *Myotis lucifugus*	Eastern chipmunk *Tamias striatus*	Fox squirrel *S. niger*	Red fox *Vulpes vulpes*
Big brown bat *Eptesicus fuscus*	Prairie vole *Microtus ochrogaster*	White-tailed deer *Odocoileus virginianus*	Racoon *Procyon lotor*
Mink *Mustela vison*			
Birds			
Upland sand piper *Bartramia longicauda*	Great blue heron *Ardea Herodias*	Ovenbird *Seiurus aurocapillus*	Blue-winged teal *Anas discors*
Bobolink *Dolichonyx oryzivorus*	Black terns *Chlidonias niger*	Wood thrush *Hylocichla mustelina*	Pied-billed grebe *Podilymbus podiceps*
Eastern meadowlark *Sturnella magna*	Hairy woodpecker *Picoides villosus*	Great egret *Ardea alba*	Marsh wren *Cistothorus palustris*
Dickcissel *Spiza americana*	Downy woodpecker *P. pubescens*	Red-winged black bird *Agelaius phoeniceus*	Yellow-headed blackbird *Xanthocephalus xanthocephalus*
Short-eared owl *Asio flammeus*	Eastern bluebird *Sialia sialis*	Cooper's hawk *Accipiter cooperii*	Canada goose *Branta canadensis*
Sandhill crane *Grus Canadensis*	Scarlet tanagers *Piranga olivacea*	Red-tailed hawk *Buteo jamaicensis*	Wild turkey *Meleagris gallopavo*
Reptiles			
Common garter snake *Thamnophis sirtalis*	Eastern hognose snake *Hetrodon platirhinos*	Northern water snake *Nerodia sipedon*	Snapping turtle *Chelydra serpentine*
Painted turtle *Chrysemys picta*			
Amphibians			
Western chorus frog *Pseudacris triseriata*	Bullfrog *Rana catesbeiana*	Northern leopard frog *Rana pipiens*	Blue-spotted salamander *Ambystoma laterale*
Spring peeper *Pseudacris crucifer*	Gray tree frog *Hyla versicolor*	American toad *Bufo americanus*	Tiger salamander *Ambystoma tigrinum*
Fish			
Largemouth bass Micropterus salmoides	Walleye Stizostedion vitreum	Common carp Cyprinus carpio	Black crappie Pomoxis nigromaculatus
Channel catfish Ictalurus punctatus	White crappie Pomoxis annualaris	Bluegill Lepomis macrochirus	

Page 3.11-10, Table 3.11-3:

Table 3.11-3. ~~Common~~ Migratory Birds in Study Area		
Common and Scientific Names		
Lake and Shoreline Birds		
Common merganser *Mergus merganser*	Osprey *Pandion haliaetus*	Killdeer *Charadrius vociferous*
Bonaparte's gull *Larus Philadelphia*	Spotted sandpiper *Actitis macularia*	
Marsh, Pond, and Lagoon Birds		
Black-crowned night heron *Nycticorax nycticorax*	Belted kingfisher *Megaceryle alcyon*	Canada goose *Branta canadensis*
Common loon *Gavia immer*	Great blue heron *Ardea herodias*	Common snipe *Gallinago gallinago*
Prairie and Savanna Birds		
Eastern kingbird *Tyrannus tyrannus*	Common nighthawk *Chordeiles minor*	Red-tailed hawk *Buteo jamaicensis*
Red-winged blackbird *Agelaius phoeniceus*	Indigo bunting *Passerina cyanea*	
Forest and Woodland Birds		
Yellow-bellied sapsucker *Sphyrapicus varius*	Cedar waxwing *Bombycilla cedrorum*	Baltimore oriole *Icterus galbula*
Ruby-throated hummingbird *Archilochus colubris*	White-throated sparrow *Zonotrichia albicollis*	

Page 3.11-11, fifth paragraph, second sentence:

The Study Area lies within the USFWS Eastern Tallgrass Prairie <u>and Hardwood Transition</u> Bird Conservation Regions and hosts some of the largest concentrations of migrant species during the spring and fall migration.

Page 3.11-11, Table 3.11-4 (This is only a portion of the table):

Table Error! No text of specified style in document.-6. Conservation and Natural Areas within the Illinois Study Area (Table 3.11-4 of the Draft EIS)			
Federal	**County Forest Preserves**	**State INAI and INHS[c] Sites**	**Nature Preserves**
Lake County			
	Mundelein Park and Recreation District Park[a]		
	Cuba Marsh Forest Preserve	INAI 1238	
		<u>INAI 1470 (Eola Road Marsh)</u>	

Page 11-19, fifth paragraph, second sentence:

The Study Area is located near the Federally-protected Hoosier Prairie Natural Area <u>(owned by INDNR)</u> and Indiana Dunes National Lakeshore.

Page 3.11-21, fifth paragraph, third sentence:

The INDNR Division of Nature Preserves <u>owns and</u> manages the site.

Page 3.11-25, Table 3.11-6:

Table 3.11-6. Federal Listed Threatened & Endangered Species with Potential to Occur within Study Area

Common and Scientific Names	Status	State	Preferred Habitat
Hine's emerald dragonfly *Somatochlora hineana*	E	Illinois	Slow moving, shallow waters, spring-fed marshes and sedge meadows.
Mead's milkweed *Asclepias meadii*	T	Illinois	Prairies
Prairie Bush Clover *Lespedeza leptostachya*	T	Illinois	Dry, gravel hill prairies
Eastern prairie fringed orchid (in Illinois) and Prairie white-fringed orchid (in Indiana) *Platanthera leucophaea*	T	Illinois and Indiana	Open, calcium rich wet meadows and low prairie; occasionally in sedge meadows and on floating bog mats
Karner blue butterfly *Lycaeides melissa samuelis*	E	Indiana	Always occurs in close association with larval host plant wild blue lupine (*Lupinus perennis*). Sandy barrens and oak savanna with periodic fire to retain open character.
Dune thistle *Cirsium pitcheri*	T	Indiana	Sand dunes around lakes Michigan, Huron, and eastern Lake Superior
Indiana bat[a]	E	Indiana and Illinois	Require cool, humid caves for hibernation and roost in wooded areas under loose tree bark or dead or dying trees.

Source: IDNR (2008e), "Threatened and Endangered Species Elemental Occurrence GIS Database" [computer file], Springfield, Illinois, IDNR Division of Realty and Planning.

[a] See Biological Report (Appendix A8 of this FEIS) for a full discussion of the Indiana bat.

Page 3.11-25, third paragraph:

Critical habitat for the Hine's emerald dragonfly (HED) is located directly adjacent to the Paul Ales Branch or the Romeoville Line of the EJ&E rail line (EJ&E Segment 18). Currently, this segment is an industrial rail line that supplies coal fuel to two power plants owned by Midwest Generation. Additionally, EJ&E Segment 18 services the Material Service Corporation, one of the largest aggregate sources of for both local and regional markets. ~~USFWS has an agreement in place with EJ&E rail line for train operations on this segment.~~ Speed limits have been imposed on this segment of rail line per the special conditions of U.S. Army Corps of Engineers (COE) permit #199600211 (applicant: Commonwealth Edison). According to this ~~agreement~~ special condition, trains must operate between 4 to 6 miles per hour to reduce adult HED mortality from direct train collisions. Furthermore, reduced speeds on this segment minimize impacts to larval HED from "squishing" ground water out from beneath the railbed and releasing sediments into larval habitats adjacent to the railroad embankment (USFWS 2008). A small portion of HED critical habitat (Unit 1) is located about 0.3 mile north of EJ&E Segment 8A.

Page 3.11-26, fifth paragraph, sixth sentence:

~~No designated critical habitat area for the Karner blue butterfly exists in the Study Area.~~ No critical habitat has been designated for the species anywhere in its range.

Page 3.11-26, sixth paragraph, second sentence:

The lupine serves as ~~host for several of~~ the sole food source during all of the insect's larval stages.

Page 3.11-28, Table 3.11-7 (This is only a portion of the table):

Table 3.11-7. State-Listed Threatened & Endangered Species Potentially within Illinois and Indiana Study Area		
Common and Scientific Names	**Status**	**Preferred Habitat**
Illinois		
Vertebrates		
Franklin's ground squirrel *Spermopholus franklinii*	T	Tall grasslands, as well as forest-prairie borders and marsh edges.

2.14.23 Water Resources

Page 3.12-2, first paragraph:

A Section 401 Water Quality Certification from the Illinois Environmental Protection Agency (IEPA) would be granted concurrently with the Section 404 Nationwide Permit(s) from the USACE, provided the project is constructed in accordance with applicable regional conditions required by the IEPA. In Indiana, the USACE has developed the Indiana Regional General Permit No. 1 (RGP 1) to replace the Nationwide Permits; the RGP1 can be used by the USACE to authorize most projects that affect less than one acre of waters of the U.S. A Section 401 Water Quality Certificate is not required from the Indiana Department of Environmental Management (IDEM) as the USACE Indiana RGP 1 covers this requirement. The Applications will need to submit for a Federal Consistency review from the IDEM for filling and dredging work in the Lake Michigan Coastal Zone under Indiana's Coastal Zone Management Act (CZMA) (16 USC 1451-1456). Normally, RGP 1 permits are exempt from CZMA review, as the USACE Section 404/401 process allows IDEM to review and comment on the Regional permit. Projects that propose impacts to waters of the U.S. equal to or greater than 1 acre in size in Indiana generally require an Individual permit, which require USACE evaluation under the environmental criteria set forth in the CWA§404(b)(1) guidelines.

Page 3.12-7, second paragraph, ninth sentence:

~~Table~~ Figure 3.12-4, below, shows the approximate locations where the maximum setbacks of WHPAs intersect the EJ&E rail line.

Page 3.12-7, third paragraph, third sentence:

The nitrate and pesticide sensitivity maps are provided in ~~Table~~ Figure 3.12-5 and ~~Table~~ Figure 3.12-6, below.

Page 3.12-32, Table 3.12-8:

Table 3.12-8. Regulation of USACE Non-Jurisdictional Wetlands					
County	**Isolated Wetland Law**	**Permit Required**	**State or County Agency**	**Delineation Requirements**	**Mitigation**
Illinois					
Lake	Watershed Development Ordinance	Watershed Development Permit for all wetland impacts >0.25 acres	Lake County Stormwater Management Commission	USACE Wetlands Delineation Manual 1987	1.5:1 for all non-High Quality Areas (HQARs)
					~~1:3~~ 3:1 for all HQARs
					50' Buffer Requirement. Buffer Impacts to be mitigated using averaging of buffer width
DuPage	Countywide	Type VII Permit	DuPage	USACE	1.5:1 for regulatory

Table 3.12-8. Regulation of USACE Non-Jurisdictional Wetlands					
County	**Isolated Wetland Law**	**Permit Required**	**State or County Agency**	**Delineation Requirements**	**Mitigation**
	Stormwater and Flood Plain Ordinance - Special Management Areas (Article 10)	for impacts >25,000 sq ft	County Department of Economic Planning and Development / Division of Environmental Concerns	Wetlands Delineation Manual 1987	wetlands (based on required functions and values assessments)
				Functions and Values Assessment	3:1 for critical wetlands (based on required functions and values assessments)
					50'-100' Buffer required depending on wetland quality
Will	Stream and Wetland Protection Ordinance, Resolution No. 98-25	Site Development Permit With Lowlands - Requires review and approval by Director / Administrator	Will County Land Use Department	USACE Wetlands Delineation Manual 1987	not specified
Cook	No specific regulations for isolated wetland basins. Floodplain rules apply to USACE jurisdictional waters.				
Indiana					
Lake ~~County~~	Indiana Administrative Code, Article 17. Wetland Activity Permits	Wetland Activity Permit	Water Pollution Control Board / IDEM / Coastal Consistency Commission	USACE Wetlands Delineation Manual 1987	1:1 to 3:1 based on Indiana Article 17 Code Classification

Page 3.12-31, fourth paragraph, third sentence:

Some of the most common and problematic invasive species in Chicago metropolitan area wetlands include: non-native or hybridized forms of ~~P~~purple loosestrife (*Lythrum salicaria)*, ~~R~~reed canary grass (*Phalaris arundinacea*), ~~Giant~~ common reed grass (*Phragmites australis*), ~~G~~glossy buckthorn (*Rhamnus frangula*), and ~~N~~narrow-leaved cattail (*Typha angustifolia*).

Page 3.12, third paragraph, fourth sentence:

Major wetlands protected through public ownership in the study area include: Cuba Marsh (Lake County, Illinois), Crabtree Preserve (Cook County), floodplain areas along Poplar Creek in Janura Forest Preserve (Cook County), Pratt's Wayne Woods wetlands along Brewster Creek and Norton Creek (DuPage County), wetlands associated with West Chicago Prairie (DuPage County), Blackwell Forest Preserve wetlands (DuPage County), Night Heron Marsh (DuPage County), Lake Renwick Heron Rookery (Will County), Des Plaines River crossing in Joliet (Will County), large marsh, meadow, and wet prairie areas in and near Hoosier Prairie (Lake County, Indiana), wetlands along Little Calumet River (Lake County), and the "dune and swale" area wetlands in and around Gary, Indiana.

Page 3.12-33, fourth paragraph, third sentence:

~~Fen effects may include the following.~~ The following anthropogenic (human influenced) activities are known to impact fens:

2.14.24 Chapter 4 of the Draft EIS

2.14.25 Commuter Capacity and Passenger Rail Service

Page 4.1-41, sixth paragraph, first and second sentences:

Metra's existing Heritage Corridor service operates six weekday trains on the CN's Joliet and Freeport subdivisions between Joliet and ~~16th~~ 21st Street in Chicago. North of ~~16th~~ 21st Street, these Metra trains use trackage owned by Amtrak to enter Chicago Union Station.

Page 4.1-42, Table 4.1-3

Table 4.1-3. CN Line Segments with Metra Service

CN Segment No.	Location	Current Daily CN Freight Trains	Proposed Daily CN Freight Trains	Current Daily Metra Trains
9	16th Street to Bridgeport	4.6	0.0	6 Heritage Corridor
14	Bridgeport to Lemoyne	2.1	0.0	6 Heritage Corridor
15	Lemoyne to Glenn Yard	2.1	2.0	6 Heritage Corridor
16	Glenn Yard to Argo	5.8	2.0	6 Heritage Corridor
17	Argo to Lemont	1.8	2.0	6 Heritage Corridor
18	Lemont to Joliet	1.8	2.0	6 Heritage Corridor
21	Tower B-12 to Schiller Park	19.3	2.0	~~22~~ 21 North Central
22	Schiller Park to Leithton	19.1	2.0	~~22~~ 21 North Central

Page 4.1-42, first paragraph, first sentence:

Metra's existing North Central service operates ~~22~~ 21 weekday trains on the CN's Waukesha Subdivision between Mundelein, Illinois and Tower B-12 in Franklin Park, Illinois. East of Tower B-12, these Metra trains use trackage owned by ~~Canadian Pacific (CPR),~~ Metra and Amtrak to enter Chicago Union Station.

Page 4.1-42, Table 4.1-4 (This is only a portion of the table):

Table 4.1-4. EJ&E And Metra Rail/Rail At-Grade Crossings

Location	Railroad That EJ&E Crosses	Metra Route Crossed	Tracks	Current Daily Freight Trains	Proposed Daily Freight Trains	Current Weekday Metra Trains On Route Crossed	Current Daily Freight Trains On Route Crossed
Spaulding	~~IC&E (Metra)~~ Metra (IC&E)	Milwaukee District West Line	IC&E 2 EJ&E 1	5.5	22.5	50	15

Page 4.1-44, second paragraph, first sentence:

At the Spaulding interlocking, Metra trains operate on trackage owned by ~~CPR~~ Metra, ~~which~~ CPR controls the interlocking at Spaulding.

Page 4.1-44, Table 4.1-5 (at right) has been replaced by the table below:

Table 4.1-5. Train Occupancy Times For EJ&E And Metra Rail/Rail At-Grade Crossings (24-Hour Period)

Location	Proposed CN Freight Trains	Total Time Occupied For Proposed CN Freight Trains (Hours)	Current Weekday Metra Trains On Route Crossed	Total Time Occupied For Current Weekday Metra Trains (Hours)	Current Freight Trains On Route Crossed	Total Time Occupied For Current Freight Trains On Route Crossed (Hours)	Total Time Crossing Is Occupied In 24-Hour Period (Hours)
Barrington	20.3	6.7	56	4.6	12	2.0	13.3
Spaulding	22.5	7.4	50	4.2	15	2.5	14.1
West Chicago	31.6	10.4	52	4.3	35	5.8	20.6
Joliet-Rock Island Tower	28.3	9.3	47	3.9	10	1.7	14.9

Updated Table 4.1-5. Train Occupancy Times for EJ&E and Metra Rail/Rail At-Grade Crossings (24-Hour Period)

Location	Proposed CN Freight Trains	Time Crossing Occupied per Freight	Total Time Crossings Occupied for CN Freight (Hours)	Opposing Crossing									Total Time Crossing is Occupied
				Current Weekday Metra Trains on Route Crossed	Time Crossing Occupied per Passenger Train (Minutes)	Total Time Occupied for Current Weekday Metra Trains (Hours)	Current Freight Trains on Route Crossed	Time Crossing Occupied per Freight Train (Minutes)	Total Time Occupied for Current Freight Trains on Route Crossed (Hours)	Number of Tracks	Percent of Crossing Route is Occupied by more than One Train	Total Time Crossing Route is Occupied	
Barrington	20.3	20	6.7	62	5	5.2	6	10	1.0	2	30	5.0	11.7
Spaulding	22.5	10	3.8	48	5	4.0	12	10	2.0	2	30	4.2	8.0
West Chicago	31.6	15	7.9	52	5	4.3	55	10	9.2	3	60	5.4	13.3

Joliet-Rock Island Tower	28.3	15	7.1	46	5	3.8	10	10	1.7	2	30	3.8	10.9

Page 4.1-44, second paragraph, first sentence:

At the Spaulding interlocking, Metra trains operate on trackage owned by ~~CPR~~ Metra, ~~which~~ CPR controls the interlocking at Spaulding.

Page 4.1-45, third paragraph, first sentence:

As discussed in Section ~~3.2.1~~ 3.1.3.1, Metra has extensively evaluated the feasibility of its proposed STAR Line, an outer circumferential commuter rail route that would use major portions of EJ&E corridor to provide suburb-to-suburb service and connect the spokes of the Metra system.

Page 4.1-48, fourth paragraph, fourth sentence:

~~CN~~ Metra controls the Kensington interlocking.

Page 4.1-50, fifth paragraph, first sentence:

Amtrak also currently operates 10 daily trains on CN's Joliet and Freeport subdivisions between Joliet and ~~16th~~ 21st Street in Chicago.

2.14.26 Existing Amtrak Service on Rail Lines That Cross Affected EJ&E Rail Line Segments

Page 4.1-51, Table 4.1-9 (at right) has been replaced by the table below:

TABLE 4.1-9 TRAIN OCCUPANCY TIMES FOR EJ&E AND AMTRAK RAIL/RAIL AT-GRADE CROSSINGS (24-HOUR PERIOD)

Location	Proposed CN Freight Trains	Total Time Occupied for Proposed CN Freight Trains (Hours)	Average Daily Amtrak Trains on Route Crossed	Total Time Occupied for Proposed Weekday Metra Trains (Hours)	Current Freight Trains on Route Crossed	Total Time Occupied for Current Freight Trains on UP Route Crossed (Hours)	Total Time Crossing is Occupied in 24-Hour Period (Hours)
Dyer	34.2	11.4	2	0.2	10	1.7	13.3

Table 4.1-9 Train Occupancy Times For EJ&E And Amtrak Rail/Rail At-Grade Crossings (24-Hour Period)

Location	Proposed CN Freight Trains	Time per CN Train (minutes)	Total Time Occupied by CN Freight Trains (hours)	Number of Tracks	Crossing Route is Occupied by more than One Train (percentage)	Total Time Occupied by CN Freight Trains (hours)	Number of Amtrak Trains	Time per Amtrak Train (minutes)	Total Time Occupied by Amtrak Trains (hours)	Current Number of Freight Trains	Time per Current Freight Train (minutes)	Total Time Occupied by Current Freight Trains (hours)	Total Time Occupied by any Train under the Proposed Action (hours)
Dyer	34.2	15	8.5	2	30	6	2	6	.2	2	15	0.5	6.7

Page 4.1-51, fifth paragraph, first sentence:

Amtrak currently operates 16 daily trains on the ~~CP~~ Metra corridor that cross the EJ&E rail line via at-grade crossing rail/rail at-grade crossings in Rondout.

2.14.27 Rail Safety

Page 4.2-1, third bullet:

- SEA also calculated the potential risk of accidents at public highway/rail at-grade crossings. Under the No-Action Alternative (current conditions), the SEA analysis predicted ~~4.455~~ 4.472 accidents annually on the EJ&E rail line ~~segments~~ and ~~6.233~~ 6.406 accidents annually on the CN rail line ~~segments~~, with three CN highway/rail at-grade crossings and ~~two~~ one EJ&E highway/rail at-grade crossing~~s~~ having a high ~~predicted~~ accident frequency (one accident every 7 years). Under the Proposed Action, the SEA analysis predicted an increase of ~~1.566 (to 6.021)~~ 1.546 (to 6.018) highway/rail accidents annually on the EJ&E rail line ~~segments~~ and a decrease of ~~2.514 (to 3.719)~~ 2.536 (to 3.880) on the CN rail lines ~~segments~~, with four EJ&E highway/rail at-grade crossings and no CN highway/rail at-grade crossings having a high accident frequency (one accident every 7 years). Overall, SEA predicted that potential highway/rail at-grade crossing accidents would decrease by 9 percent (from ~~10.688 to 9.740~~ 10.877 to 9.898) under the Proposed Action. [Section 4.2.2]

Page 4.2-9, Table 4.2-7 (This is only a portion of the table):

Table 4.2-7. Rail/Rail At-Grade Crossings for EJ&E Rail Line Segments							
Location	**EJ&E Subdivision & Milepost**	**Railroad That EJ&E Crosses**	**Current Daily EJ&E Freight Trains**	**Current Weekday Passenger Trains On EJ&E Route**	**Current Weekday Passenger Trains On Route Crossed**	**Current Daily Freight Trains On Route Crossed**	**Railroad That Controls Operations**
Rondout	Western 65.5	CP/Metra/Amtrak	3.2	0	~~46~~ 48 Metra 16 Amtrak	10	~~Metra~~ CPR
Leithton	Western 60.3	CN/Metra	5.3	0	~~22~~ 21 Metra	19.1	CN
Barrington	Western 49.6	UP/Metra	5.3	0	~~56~~ 66 Metra	7	EJ&E
Spaulding	Western 37.5	CP/ICE/Metra	5.5	0	~~50~~ 54 Metra	~~31~~ 7	~~Metra~~ CPR

Page 4.2-10, Table 4.2-8 (This is only a portion of the table):

Table 4.2-8. Rail/Rail At-Grade Crossings for CN Rail Line Segments							
Location	**CN Subdivision and Milepost**	**Railroad That CN Crosses**	**Current Daily CN Freight Trains**	**Current Weekday Passenger Trains on CN Route**	**Current Weekday Passenger Trains on Route Crossed**	**Current Daily Freight Trains on Route Crossed**	**Railroad That Controls Operations**
Tower B-12	Waukesha 15.5	CP/Metra	19.3	0[a]	~~58~~ 62 Metra	46.0	Metra
Deval	Waukesha 23.4	UP/Metra	19.1	~~22~~ 21 Metra	~~65~~ 85 Metra	10.0	Deval Tower
21st Street	Freeport 2.0	Amtrak	6.4	0	12 Amtrak 30 Metra	0.0	Amtrak
16th Street	Chicago 1.5	Metra	4.6	6 Amtrak	~~68~~ 78 Metra	0.0	~~16th Street Tower~~ Metra
Kensington	Chicago 14.5	NICTD	8.4	6 Amtrak	37 NICTD	0.0	~~Kensington Tower~~ Metra
Ashburn	Elsdon 12.8	NS/Metra	3.4	0	30 Metra	10	NS

Note:

[a] 21 Metra trains using the CN route enter and use B-12, but do not cross on the diamonds.

Page 4.2-11, Table 4.2-9 (This is only a portion of the table):

Table 4.2-9. Rail/Rail At-Grade Crossings on the EJ&E that Would Experience Changes in Freight Rail Traffic Under the Proposed Action.

Location	EJ&E Subdivision & Milepost	Railroad That EJ&E Crosses	Current Daily EJ&E and CN Freight Trains	Current Weekday Passenger Trains on EJ&E Route	Proposed Daily CN+EJ&E Freight Trains	Current Weekday Passenger Trains on Route Crossed	Current Daily Freight Trains on Route Crossed	Railroad That Controls Operations
Rondout	Western 65.5	CP/Metra/ Amtrak	3.2	0	3.2	~~46~~ 48 Metra 16 Amtrak	10	~~Metra~~ CPR
Leithton	Western 60.3	CN/Metra	5.3	0	5.3	~~22~~ 21 Metra	2	CN
Barrington	Western 49.6	UP/Metra	5.3	0	20.3	~~56~~ 66 Metra	7	EJ&E
Spaulding	Western 37.5	CP/ICE/Metra	5.5	0	20.3	~~50~~ 54 Metra	~~31~~ 7	~~Metra~~ CPR

Page 4.2-12, Table 4.2-10 (This is only a portion of the table):

Table 4.2-10. Rail/Rail At-Grade Crossings on the CN That Experience Changes in Freight Rail Traffic Under the Proposed Action

Location	CN Subdivision and Milepost	Railroad That CN Crosses	Current Daily CN Freight Trains	Current Weekday Passenger Trains on CN Route	Proposed Daily CN and EJ&E Freight Trains	Current Weekday Passenger Trains on Route Crossed	Current Daily Freight Trains on Route Crossed	Railroad That Controls Operations
16th Street	Chicago 1.5	Metra	4.6	6 Amtrak	0	68 Metra	0	~~16th Street Tower~~ Metra
Kensington	Chicago 14.5	NICTD	8.4	6 Amtrak	2	37 NICTD	0	~~Kensington Tower~~ Metra

Page 4.2-15, second paragraph, first, second, and third sentences:

SEA analyzed the predicted accidents for the rail lines ~~segments~~ under the No-Action Alternative. The analysis shows an expected ~~4.471~~ 4.472 accidents per year on the EJ&E rail line ~~segments~~ and ~~6.264~~ 6.018 on the CN rail line ~~segments~~. The overall expected number of accidents is ~~10.735~~ 10.877 per year.

Page 4.2-17, Table 4.2-13:

Table 4.2-13. Exposure (Trains x Vehicles) No-Action

USDOT	Segment	Street	MP	Subdivision	Municipality	County	State	Exposure Factor (No-Action)
283201W	CN 23A EJE 4B CN 33D	Broad Street	36.09 (CN) 36.22 (EJ&E)	Eastern (EJ&E)	Griffith	Lake	IN	~~1,049,836~~ 634,133

Page 4.2-17, second paragraph, first sentence:

Broad Street is a unique crossing in that it has seven tracks (two CN main tracks, two EJ&E main tracks, one connection track, and ~~three~~ two industrial switching tracks) that are in close proximity to each other and utilize the same set of warning devices.

Page 4.2-17, third and fourth paragraphs:

SEA analyzed the predicted accidents for the affected rail line segments assuming the Applicants' Proposed Action was fully implemented. The findings predict that the expected accidents or incidents at highway/rail at-grade crossings would increase from ~~4.455 to 6.021~~ 4.472 to 6.018 accidents per year on the EJ&E rail line ~~segments~~ and decrease from ~~6.233 to 3.719~~ 6.406 to 3.880 on the CN rail lines ~~segments~~. The findings predict that the overall accidents would decrease from ~~10.688 to 9.740~~ 10.877 to 9.898 accidents per year under the Proposed Action.

SEA concluded that the predicted annual accidents as a result of full implementation of the Applicants' operating plan would result in an increase of ~~1.566~~ 1.546 highway/rail accidents per year on the EJ&E line, and a decrease of ~~2.514~~ 2.536 accidents per year on the CN line, for a net decrease of ~~0.948~~ 0.980 accidents per year. This represents a 9 percent decrease.

Page 4.2-19, Table 4.2-16:

Table 4.2-16. Vehicle Exposure (Trains x Vehicles) No-Action and Proposed Action

Street	MP	Subdivision	Municipality	County	State	Exposure Factor	
						No-Action	Proposed Action
Ogden Avenue (US 34)	19.05	Western	near Aurora	DuPage	IL	~~719,500~~ 723,927	~~1,810,206~~ 1,821,345
Lincoln Highway	30.69	Eastern	Lynwood	Cook	IL	~~404,491~~ 298,217	~~1,356,235~~ 999,905
Broad Street	36.09	Eastern	Griffith	Lake	IN	~~1,049,836~~ 634,133	~~1,113,462~~ 731,993
Montgomery Road	18.18	Western	near Aurora	DuPage	IL	425,957	1,071,675

Page 4.2-19, second paragraph, first sentence:

Broad Street is a unique crossing in that it currently has seven tracks (two CN main tracks, two EJ&E main tracks, one connection track, and ~~three~~ two industrial switching tracks) that are in close proximity to each other and utilize the same set of warning devices.

Pages 4.2-34 and -35, Table 4.2-23:

Table 4.2-23. Changes in Potential Hazardous Material Releases No-Action vs. Proposed Action

Rail Line Segment	Current Annual Hazardous Material Carloads	Proposed Action Annual Hazardous Material Carloads	Segment Length (Miles)	Current Interval Between Anticipated Hazardous Material Releases (Years)	Proposed Action Interval Between Anticipated Hazardous Material Releases (Years)
CN 1	69,775	7,146	7.9	355	3,462
CN 2	90,922	-	1.8	1,194	n/a
CN 3	34,455	-	2.1	2,701	n/a
CN 4	29,932	-	2.4	2,721	n/a
CN 5	29,932	-	1.0	6,529	n/a
CN 6	28,110	-	2.8	2,483	n/a
CN 7	27,753	-	3.6	1,956	n/a
CN 8	27,753	-	6.6	1,067	n/a
CN 9	24,767	-	2.3	3,431	n/a
CN 10	22,641	-	3.9	2,213	n/a
CN 11	30,723	-	0.6	10,602	n/a
CN 12	26,084	6,779	5.8	1,292	4,971
CN 13	22,318	6,779	21.0	417	1,373
CN 14	21,692	-	4.4	2,048	n/a
CN 15	33,074	4,188	2.5	2,364	18,667
CN 16	50,950	20,463	2.7	1,421	3,537
CN 17	26,228	20,463	12.2	611	783
CN 18	14,223	32,468	11.5	1,195	523
CN 19	28,023	-	0.1	69,743	n/a
CN 20	28,023	-	4.5	1,550	n/a
CN 21	57,300	1,916	2.3	1,483	44,350
CN 22	57,220	2,256	20.1	170	4,310
CN 23	102,401	3,270	10.9	175	5,483
CN 24	99,622	3,266	2.0	981	29,921
CN 25	58,469	3,249	3.9	857	15,424
CN 26	14,146	-	7.5	1,842	n/a
EJ&E -2	-	515	4.2	n/a	90,356
EJ&E -1	-	515	4.6	n/a	82,499
EJ&E 0	-	4,021	3.4	n/a	14,296
EJ&E 1	19,163	148,299	2.2	7,974	599
EJ&E 2	16,608	145,744	1.4	14,459	958

Table 4.2-23. Changes in Potential Hazardous Material Releases No-Action vs. Proposed Action					
Rail Line Segment	Current Annual Hazardous Material Carloads	Proposed Action Annual Hazardous Material Carloads	Segment Length (Miles)	Current Interval Between Anticipated Hazardous Material Releases (Years)	Proposed Action Interval Between Anticipated Hazardous Material Releases (Years)
EJ&E 3	16,608	145,744	2.0	10,121	670
EJ&E 4	16,316	153,847	3.6	5,723	353
EJ&E 5	26,134	181,222	11.0	1,169	98
EJ&E 6	28,726	181,040	~~3.5~~ 5.5	3,344	308
EJ&E 7	17,885	131,692	20.9	899	71
EJ&E 8	17,849	145,306	3.1	6,076	434
EJ&E 9	17,849	145,306	8.6	2,190	156
EJ&E 10	15,841	143,299	10.2	2,081	134
EJ&E 11	11,206	115,048	7.8	3,846	218
EJ&E 12	7,702	99,024	6.6	6,614	299
EJ&E 13	10,585	76,431	2.1	15,123	1,218
EJ&E 14	6,607	66,904	22.7	2,242	129
EJ&E 15	3,431	3,431	5.2	18,842	10,954

2.14.28 Transportation

Page 4.3-8, Table 4.3-3:

Table 4.3-3. Total Vehicle Delay				
	No-Action (hours/day)	Proposed Action (hours/day)	No-Action (hours/year)	Proposed Action (hours/year)
EJ&E Rail Line	~~275~~ 280	~~2,030~~ 2,075	~~1,670~~ 101,930	~~12,370~~ 757,295
CN Rail Lines	~~1,600~~ 1,660	~~320~~ 310	~~9,710~~ 606,500	~~1,960~~ 112,810
Total	~~1,875~~ 1,940	~~2,350~~ 2,385	~~11,380~~ 708,430	~~14,330~~ 870,105
Difference	~~475~~ 445		~~2,950~~ 161,675	

Page 4.3-9, first bullet:

- Minimal: when the Proposed Action calculated queue length blocks no major roadways and the crossing LOS is D or better.

Page 4.3-10, first bullet:

- Moderate: when the Proposed Action calculated queue length blocks a major roadway that is also blocked under the No-Action Alternative and the crossing LOS is D or better.

Page 4.3-10, second bullet:

- Serious: when the Proposed Action queue length blocks a major roadway that is not blocked under the No-Action Alternative or the crossing LOS is reduced to E-F, or the Total Vehicle Traffic Delay in a 24-hour period exceeds 40 hours (2,400 minutes).

Pages 4.3-12 through -15, Table 4.3-4 (This is only a portion of the table):

Table 4.3-4 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the EJ&E Rail Line

Street	2015 ADT	Trains per Day		2015 Level of Service			Queue Length (Feet)		Average Delay per Delayed Vehicle (Minutes)		Total Vehicle Traffic Delay (24-Hr) (Minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Near Mundelein, IL												
IL 60 & 83	29,659	5.3	20.3	A	B	F	1,201	~~1,215~~ 2,426	1.1	2.1	194.7	2,872.8
Near Bartlett, IL												
Stearns Road	~~21,129~~ 12,364	5.5	22.5	A	A	D	~~325~~ 218	~~625~~ 365	0.9	1.5	~~102.6~~ 61.0	~~1,168.5~~ 699.9
Near West Chicago, IL												
Hawthorne Lane	20,024	4.4	23.4	A	B	~~D~~ F	694	1,430	0.9	1.9	76.5	1,765.1
Near Plainfield, IL												
Van Dyke Road	6,921	~~18.5~~ 15.7	~~42.3~~ 39.5	A	B	C	295	389	1.1	1.5	~~167.2~~ 141.9	~~685.5~~ 623.1
Renwick Road	12,873	18.5	42.3	A	B	C	~~249~~ 516	~~328~~ 695	1.0	1.4	265.0	1,143.8
Plainfield, IL												
143rd Street	5,952	~~18.5~~ 15.7	~~42.3~~ 39.5	A	B	A	~~187~~ 249	~~247~~ 328	1.1	1.4	~~140.8~~ 118.8	~~539.0~~ 514.8
Plainfield-Naperville Road	4,568	18.5	42.3	A	B	F	~~907~~ 187	~~1,197~~ 247	1.1	1.4	105.6	406.0
Main Street	22,175	18.5	42.3	A	B	~~A~~ F	~~75~~ 907	~~100~~ 1,197	1.1	1.4	512.6	1,969.8
Center Street	1,845	18.5	42.3	A	B	A	~~158~~ 75	~~209~~ 100	1.1	1.4	42.9	163.8
Eastern Avenue	3,876	18.5	42.3	A	B	~~E~~ A	~~464~~ 158	~~613~~ 209	1.1	1.4	89.1	344.4
Lockport Road	11,351	18.5	42.3	A	B	~~D~~ E	~~516~~ 464	~~695~~ 613	1.1	1.4	262.9	1,008.0
Joliet, IL												
Woodruff Road	10,659	18.5	42.3	B	F	~~C~~ E	1,550	2,371	2.6	4.4	1,411.8	9,380.8

Table 4.3-4 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the EJ&E Rail Line

Street	2015 ADT	Trains per Day		2015 Level of Service			Queue Length (Feet)		Average Delay per Delayed Vehicle (Minutes)		Total Vehicle Traffic Delay (24-Hr) (Minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Frankfort, IL												
Center Avenue	7,752	6.4	28.3	A	B	C	385	530	1.2	1.7	~~33.6~~ 88.4	~~300.9~~ 748.8
Near Frankfort, IL												
Old Sauk Trail	3,461	6.4	28.3	A	B	A	160	226	1.1	1.5	~~76.8~~ 33.6	~~676.6~~ 300.9
Pfeiffer Road / 88th Avenue	7,752	6.4	28.3	A	B	D	358	506			~~104.5~~ 76.8	~~855.0~~ 676.6
Harlem Avenue	12,336	6.4	28.3	A	A	D	534	726	1.3	1.8	~~88.4~~ 104.5	~~748.8~~ 855.0
Matteson, IL												
Main Street	4,375	~~6.4~~ 8.6	~~28.3~~ 34.6	A	~~C~~ D	B	186	475	~~1.1~~ 1.3	~~2.8~~ 3.1	~~36.3~~ 67.1	~~1,036.0~~ 1,522.7
Chicago Heights, IL												
East End Avenue	5,086	~~8.6~~ 10.2	~~31.6~~ 34.2	A	~~C~~ D	B	338	515	1.7	~~2.6~~ 3.0	~~137.7~~ 166.1	~~1,175.2~~ 1,717.6
Griffith, IN												
Broad Street[a]	19,572	7.6	~~28.6~~ 23.6	A	~~B~~ C	F	~~901~~ 1,311	~~1,615~~ 2,211	~~1.2~~ 1.7	2.1 2.9	~~228.0~~ 482.0	~~2,694.3~~ 4,260.1

Notes:

a Broad Street crosses multiple railroad lines at grade in Griffith, Indiana. These railroad lines include existing CN and EJ&E rail lines. Please see Figure 4.3-11 of the Draft EIS for a schematic of the Broad Street at-grade crossing. Table 4.3-4 only reports the total vehicle delay in a 24-hour period on the EJ&E rail line. The total increase in vehicle traffic delay for the Proposed Action as a result of a combined effect of both CN and EJ&E rail lines is 4,930 minutes in a 24-hour period (that is 5,512 total minutes of delay under the Proposed Action minus 582 total minutes of delay under the No-Action Alternative). See Table 4.3-8.

Page 4.3-16 through -18, Table 4.3-5 (This is only a portion of the table):

Table 4.3-5. Train Operations Factors for the EJ&E Rail Line						
Street	**Length of Train**		**Train Speed**		**Trains per Day**	
	No-Action	**Proposed Action**	**No-Action**	**Proposed Action**	**No-Action**	**Proposed Action**
Near Plainfield, IL						
Van Dyke Road	3,398	5,842	32	38	~~18.5~~ 15.7	~~42.3~~ 39.5
Plainfield, IL						
143rd Street	3,398	5,842	33	39	~~18.5~~ 15.7	~~42.3~~ 39.5
Matteson, IL						
Main Street	3,795	6,684	~~36~~ 29	~~20~~ 18	~~6.4~~ 8.6	~~28.3~~ 34.6
Chicago Heights, IL						
East End Avenue	3,615	6,256	19	~~20~~ 17	~~8.6~~ 10.2	~~31.6~~ 34.2
Griffith, IN						
Broad Street[a]	~~2,717~~ 3,261	~~5,915~~ 6,012	~~23~~ 17	~~24~~ 17	7.6	~~28.6~~ 23.6

Notes:

[a] Broad Street crosses multiple railroad lines at grade in Griffith, Indiana. These railroad lines include existing CN and EJ&E rail lines. Please see Figure 4.3-11 of the Draft EIS for a schematic of the Broad Street at-grade crossing.

Pages 4.3-19 through -26, Table 4.3-6 (This is only a portion of the table):

Table 4.3-6. Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Lines

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Waukesha Subdivision												
River Forest, IL												
Forest Avenue	3,035	~~3.5~~ 5.4	0.0	A	A	A	213	0	1.8	0.0	~~37.8~~ 58.5	0.0
Augusta Street	3,035	~~3.5~~ 5.4	0.0	A	A	A	213	0	1.8	0.0	~~37.8~~ 58.5	0.0
Keystone Avenue	3,035	~~3.5~~ 5.4	0.0	A	A	A	213	0	1.8	0.0	~~37.8~~ 58.5	0.0
Thatcher Avenue	10,039	~~3.5~~ 5.4	0.0	A	A	~~A~~ C	471	0	1.8	0.0	~~124.2~~ 193.5	0.0
River Grove, IL												
1st Avenue (IL 171)	32,060	~~3.5~~ 5.4	0.0	A	A	C	1,127	0	1.8	0.0	~~394.2~~ 618.0	0.0
5th Avenue	12,190	~~3.5~~ 5.4	0.0	A	A	~~C~~ B	428	0	1.8	0.0	~~149.4~~ 235.0	0.0
Melrose Park, IL												
George Street	4,661	~~3.5~~ 5.4	0.0	A	A	B	347	0	1.9	0.0	~~64.6~~ 100.7	0.0
Franklin Park, IL												
Fullerton Avenue	4,780	~~3.5~~ 5.4	0.0	A	A	B	391	0	2.1	0.0	~~79.8~~ 124.9	0.0
Des Plaines, IL												
Pratt Avenue	2,735	19.1	2.0	B	A	~~B~~ A	253	121	2.4	1.2	321.6	8.4
Touhy Avenue	28,085	19.1	2.0	A	A	~~A~~ D	852	434	2.0	1.0	2,260.0	60.0
Frontage Road	3,481	19.1	2.0	A	A	~~D~~ A	264	135	2.0	1.0	280.0	7.0
Prospect Avenue	4,906	19.1	2.0	A	A	B	372	190	2.0	1.0	394.0	11.0
Oakton Street	29,160	19.1	2.0	A	A	~~A~~ D	1,106	600	2.0	1.1	2,348.0	73.7

Table 4.3-6. Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Lines

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Algonquin Road	11,114	19.1	2.0	A	A	~~D~~ C	798	438	1.9	1.0	803.7	24.0
Graceland Avenue (US 12)	23,770	19.1	2.0	A	A	~~C~~ F	1,662	937	1.8	1.0	1,587.6	52.0
Prairie Avenue	2,873	19.1	2.0	A	A	~~F~~ A	191	111	1.7	1.0	171.7	6.0
Golf Road (IL 58)	34,985	19.1	2.0	B	A	~~A~~ E	1,367	755	2.0	1.1	2,900.0	92.4
Rand Road (US 12)	29,865	19.1	2.0	B	A	~~E~~ D	1,203	644	2.1	1.1	2,679.6	79.2
Central Road	22,348	19.1	2.0	A	A	~~D~~ F	1,453	816	1.7	0.9	1,310.7	40.5
Near Mount Prospect, IL												
Kensington Road/ Foundry Road	10,090	19.1	2.0	A	A	~~F~~ D	614	335	1.6	0.9	521.6	17.1
Mount Prospect, IL												
Euclid Avenue	22,826	19.1	2.0	A	A	~~D~~ C	680	368	1.6	0.8	1,155.2	32.8
Prospect ~~Hts~~ Heights, IL												
Wolf Road	25,216	19.1	2.0	A	A	~~C~~ F	1,474	813	1.5	0.8	1,173.0	36.0
Camp McDonald Road	10,397	19.1	2.0	A	A	~~F~~ D	608	335	1.5	0.8	483.0	15.2
Hintz Road	24,977	19.1	2.0	A	A	~~A~~ E	776	434	1.6	0.9	1,318.4	43.2
Wheeling, IL												
Willow Road	3,585	19.1	2.0	A	A	~~D~~ A	214	117	1.6	0.9	180.8	6.3
Dundee Road (IL 68)	39,374	19.1	2.0	A	A	~~E~~ F	1,107	653	1.5	0.9	1,762.5	65.7
Buffalo Grove, IL												
Deerfield Parkway/ Busch Road	20,764	19.1	2.0	A	A	~~F~~ D	1,350	745	1.7	0.9	32.0	2.0
Buffalo Grove Road	17,857	19.1	2.0	A	A	~~D~~ F	670	384	1.5	0.8	799.5	25.6
Near Vernon Hills, IL												
US 45	23,653	19.1	2.0	A	A	F	~~531~~ 887	531	0.9	0.9	379.8	39.6

Table 4.3-6. Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Lines

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Vernon Hills, IL												
Butterfield Road	20,071	19.1	2.0	A	A	~~F~~ C	~~354~~ 598	354	0.9	0.9	338.4	35.1
Mundelein, IL												
Townline Road (IL 60)	46,768	19.1	2.0	A	A	~~C~~ F	~~799~~ 1,340	799	0.9	0.9	763.2	80.1
Allanson Road	21,179	~~19.1~~ 20.3	~~19.1~~ 17.3	A	B	F	1,434	2,310	1.8	2.8	~~1,369.8~~ 1,422.9	~~3,432.8~~ 3,149.2
Hawley Street	8,998	~~19.1~~ 20.3	~~19.1~~ 17.3	A	A	~~F~~ D	406	406	1.8	1.8	~~581.4~~ 604.5	~~581.4~~ 515.2
Park Street	732	~~19.1~~ 20.3	~~19.1~~ 17.3	A	A	~~D~~ A	50	50	1.8	1.8	~~46.8~~ 49.2	~~46.8~~ 41.9
Maple Avenue	15,052	~~19.1~~ 20.3	~~19.1~~ 17.3	A	A	~~A~~ D	1,019	1,019	1.8	1.8	~~973.8~~ 1,011.3	~~973.8~~ 861.8
Winchester Road	7,475	~~19.1~~ 20.3	~~19.1~~ 17.3	A	A	~~D~~ C	227	227	1.6	1.6	~~385.6~~ 405.1	~~385.6~~ 345.2
Grays Lake, IL												
Peterson Road	22,148	~~19.1~~ 20.3	~~19.1~~ 17.3	A	A	~~C~~ F	491	491	1.4	1.4	~~911.4~~ 997.6	~~911.4~~ 850.2
Harris Road	4,434	~~19.1~~ 20.3	~~19.1~~ 17.3	A	A	~~F~~ B	246	246	1.4	1.4	~~182.0~~ 199.7	~~182.0~~ 170.2
Freeport Subdivision												
Hillside, IL												
Harrison Street	10,948	3.0	1.7	A	A	C	723	382	1.7	0.9	102.0	16.2
Near Bartlett, IL												
Powis Road	5,510	~~3.0~~ 2.0	~~2.6~~ 2.0	A	A	C	357	789	1.7	3.7	~~51.0~~ 33.4	~~210.9~~ 163.2
South Elgin, IL												
IL 25	10,830	~~3.0~~ 2.0	~~2.6~~ 2.0	A	A	D	450	450	1.1	1.1	~~40.7~~ 27.0	~~35.2~~ 27.0

Table 4.3-6. Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Lines

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Randall Road	46,189	~~3.0~~ 2.0	~~2.6~~ 2.0	A	A	F	959	959	1.1	1.1	~~176.0~~ 115.1	~~152.9~~ 115.1
Joliet Subdivision												
Lemont, IL												
Stephen Street	14,222	1.8	2.0	A	A	~~A~~ F	925	846	1.7	1.5	78.2	70.5
Romeoville, IL												
Romeo Road/ 135th Street	19,102	1.8	2.0	A	A	F	904	1,067	~~1.3~~ 1.2	1.5	62.4	88.5
Joliet, IL												
Ohio Street	7,198	~~2.9~~ 1.8	~~2.9~~ 2.0	~~B~~ A	~~B~~ A	C	~~1,624~~ 1,043	~~1,624~~ 1,339	~~5.9~~ 3.8	~~5.9~~ 4.8	~~772.9~~ 93.6	~~772.9~~ 355.2
Jackson Street	20,380	~~2.9~~ 1.8	~~2.9~~ 2.0	~~B~~ A	~~B~~ A	D	~~4,597~~ 2,952	~~4,597~~ 3,791	~~5.9~~ 3.8	~~5.9~~ 4.8	~~2,183.0~~ 562.4	~~2,183.0~~ 1,012.8
Chicago Subdivision												
~~**University Park, IL**~~ **Richton Park, IL**												
University Parkway / Stuenkel Road	13,640	~~12.8~~ 13.8	~~12.8~~ 12.3	A	A	F	318	318	1.2	1.2	~~271.2~~ 295.1	~~271.2~~ 263.0
University Park, IL												
W. Dralle Road	4,012	~~12.8~~ 13.8	~~12.8~~ 12.3	A	A	~~F~~ B	93	93	1.2	1.2	~~79.2~~ 86.8	~~79.2~~ 77.4
Elsdon/South Bend Subdivision												
Chicago, IL												
55th Street	31,431	~~3.3~~ 1.6	~~0.0~~ 1.6	A	A	F	2,632	~~0~~ 2,632	4.4	0.0	~~2,125.2~~ 1,029.6	~~0.0~~ 1,029.6
71st Street	16,612	~~3.3~~ 1.6	~~0.0~~ 1.6	A	A	F	2,783	~~0~~ 2,783	4.4	0.0	~~1,122.0~~ 545.6	~~0.0~~ 545.6
79th Street	29,291	3.4	0.0	A	A	D	2,453	~~3~~ 0	4.4	0.0	2,037.2	0.0
Columbus Avenue	18,046	3.4	0.0	A	A	~~A~~ C	1,511	0	4.4	0.0	1,254.0	0.0

Table 4.3-6. Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Lines

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Blue Island, IL												
Broadway Street	5,916	14.9	1.0	~~A~~ E	A	B	~~206~~ 647	~~149~~ 517	~~1.8~~ 5.7	~~1.3~~ 4.5	~~307.8~~ 3,049.5	~~10.4~~ 130.5
Harvey, IL												
Ashland Avenue	13,944	14.9	1.0	A	A	F	996	713	1.9	1.3	782.8	26.0
Broadway Avenue	886	14.9	1.0	~~E~~ A	A	A	~~97~~ 31	~~77~~ 22	~~5.7~~ 1.8	~~4.5~~ 1.3	~~456.0~~ 46.8	~~18.0~~ 1.3
Lansing, IL												
182nd Street/Ridge Road	9,336	22.1	2.9	A	A	D	530	491	1.5	1.4	489.0	56.0
Griffith, IN												
Broad Street[a]	19,572	22.1	2.9	A	A	F	1,184	1,170	1.6	1.6	1,163.2	150.4
Colfax Street	14,139	~~23.3~~ 24.8	~~23.3~~ 18.6	A	~~A~~ B	F	787	~~787~~ 1,125	1.4	~~1.4~~ 2.1	~~714.0~~ 785.4	~~714.0~~ 1,183.7
Merrillville, IN												
Taft Street	30,473	~~23.3~~ 24.8	~~23.3~~ 18.6	A	A	F	1,697	1,697	1.4	1.4	~~1,537.2~~ 1,692.7	~~1,537.2~~ 1,269.5
Madison Street	9,031	~~23.3~~ 24.8	~~23.3~~ 18.6	A	A	D	503	503	1.4	1.4	~~455.0~~ 501.6	~~455.0~~ 376.2
Broadway Street	39,989	~~23.3~~ 24.8	~~23.3~~ 18.6	A	A	F	1,113	1,113	1.4	1.4	~~2,017.4~~ 2,221.3	~~2,017.4~~ 1,666.0

Notes:

a Broad Street crosses multiple railroad lines at grade in Griffith, Indiana. These railroad lines include existing CN and EJ&E rail lines. Please see Figure 4.3-11 of the Draft EIS for a schematic of the Broad Street at-grade crossing. Table 4.3-6 only reports the total vehicle delay in a 24-hour period on the CN rail lines. The total increase in vehicle traffic delay for the Proposed Action as a result of a combined effect of both CN and EJ&E rail lines is 4,930 minutes in a 24-hour period (that is 5,512 total minutes of delay under the Proposed Action minus 582 total minutes of delay under the No-Action Alternative). See Table 4.3-8.

Pages 4.3-27 through -31, Table 4.3-7 (This is only a portion of the table):

Table 4.3-7. Train Operations Factors for the CN Rail Lines						
Street	Length of Train		Train Speed		Trains Per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Waukesha Subdivision						
River Forest, IL						
Forest Avenue	6,104	0	30	0	~~3.5~~ 5.4	0.0
Augusta Street	6,104	0	30	0	~~3.5~~ 5.4	0.0
Keystone Avenue	6,104	0	30	0	~~3.5~~ 5.4	0.0
Thatcher Avenue	6,104	0	30	0	~~3.5~~ 5.4	0.0
River Grove, Il						
1st Avenue (IL 171)	6,104	0	30	0	~~3.5~~ 5.4	0.0
5th Avenue	6,104	0	~~30.0~~ 30	0	~~3.5~~ 5.4	0.0
Melrose Park, IL						
George Street	6,104	0	~~28.0~~ 28	~~0.0~~ 0	~~3.5~~ 5.4	0.0
Franklin Park, IL						
Fullerton Avenue	6,104	0	~~25.0~~ 25	~~0.0~~ 0	~~3.5~~ 5.4	0.0
Belmont Avenue	6,388	2,645	~~19.0~~ 19	~~19.0~~ 19	19.3	2.0
Des Plaines, IL						
Prospect Avenue	6,468	3,129	29	34	19.1	2.0
Near Vernon Hills, IL						
US 45	~~3,129~~ 6,468	3,129	42	42	19.1	2.0
Vernon Hills, IL						
Butterfield Road	~~3,129~~ 6,468	3,129	39	39	19.1	2.0
Mundelein, IL						
Townline Road (IL 60)	~~3,129~~ 6,468	3,129	41	41	19.1	2.0
Allanson Road	6,800	6,800	35	20	~~19.1~~ 20.3	~~19.1~~ 17.3
Hawley Street	6,800	6,800	35	35	~~19.1~~ 20.3	~~19.1~~ 17.3
Park Street	6,800	6,800	35	35	~~19.1~~ 20.3	~~19.1~~ 17.3
Maple Avenue	6,800	6,800	35	35	~~19.1~~ 20.3	~~19.1~~ 17.3
Winchester Road	6,800	6,800	40	40	~~19.1~~ 20.3	~~19.1~~ 17.3
Grays Lake, IL						
Peterson Road	6,800	6,800	45	45	~~19.1~~ 20.3	~~19.1~~ 17.3
Harris Road	6,800	6,800	45	45	~~19.1~~ 20.3	~~19.1~~ 17.3
Freeport Subdivision						
Chicago, IL						
Pulaski Road	5,224	0	19	~~19~~ 0	2.5	0.0
Hillside, IL						
Harrison Street	6,755	3,060	36	39	3.0	1.7
Near Bartlett, IL						
Powis Road	4,600	4,600	25	10	~~3.0~~ 2.0	~~2.6~~ 2.0
South Elgin, IL						
IL 25	4,600	4,600	45	45	~~3.0~~ 2.0	~~2.6~~ 2.0
Randall Road	4,600	4,600	45	45	~~3.0~~ 2.0	~~2.6~~ 2.0

Table 4.3-7. Train Operations Factors for the CN Rail Lines						
Street	Length of Train		Train Speed		Trains Per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Joliet Subdivision						
Joliet, IL						
Ohio Street	~~7,500~~ 4,659	~~7,500~~ 6,108	10	10	~~2.9~~ 1.8	~~3.0~~ 2.0
Jackson Street	~~7,500~~ 4,659	~~7,500~~ 6,108	10	10	~~2.9~~ 1.8	~~3.0~~ 2.0
Chicago Subdivision						
~~**University Park, IL**~~ **Richton Park, IL**						
University Parkway / Stuenkel Road	5,400	5,400	45	45	~~12.8~~ 13.8	~~13.0~~ 12.3
University Park, IL						
W. Dralle Road	5,400	5,400	45	45	~~12.8~~ 13.8	~~12.8~~ 12.3
Elsdon/South Bend Subdivision						
Chicago, IL						
55th Street	4,365	~~0~~ 4,365	8	~~0~~ 8	~~3.3~~ 1.6	~~0.0~~ 1.6
71st Street	4,365	~~0~~ 4,365	8	~~0~~ 8	~~3.3~~ 1.6	~~0.0~~ 1.6
Blue Island, IL						
Broadway Street	7,256	5,711	~~36~~ 10	~~43~~ 10	14.9	1.0
Harvey, IL						
Ashland Avenue	7,256	5,711	35	42	14.9	1.0
Broadway Avenue	7,256	5,711	~~10~~ 36	~~10~~ 43	14.9	1.0
Lansing, IL						
182nd Street/Ridge Road	6,081	6,489	39	46	22.1	2.9
Griffith, IN						
Broad Street[a]	6,081	6,489	36	39	22.1	2.9
Colfax Street	6,081	6,081	40	~~40~~ 26	~~23.3~~ 24.8	~~23.3~~ 18.6
Merrillville, IN						
Taft Street	6,081	6,081	40	40	~~23.3~~ 24.8	~~23.3~~ 18.6
Madison Street	6,081	6,081	40	40	~~23.3~~ 24.8	~~23.3~~ 18.6
Broadway Street	6,081	6,081	40	40	~~23.3~~ 24.8	~~23.3~~ 18.6

Notes:

[a] Broad Street crosses multiple railroad lines at grade in Griffith, Indiana. These railroad lines include existing CN and EJ&E rail lines. Please see Figure 2.4, above, for a schematic of the Broad Street at-grade crossing.

Pages 4.3-32 and -33, Table 4.3-8 (This is only a portion of the table):

Table 4.3-8. EJ&E Substantially Affected Highway/Rail At-Grade Crossing Vehicle Delay Data

Street	2015 ADT	Trains per Day		Train Speed		Average Delay per Delayed Vehicle		Total Delayed Vehicles per Day		Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes	
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Griffith, IN													
Broad Street[a]	19,572	~~7.6~~ 32.4	~~28.6~~ 37.2	~~23~~ 40	~~24~~ 19	~~1.2~~ 0.9	~~2.1~~ 2.7	~~190~~ 628	~~1,283~~ 2,071	A	~~B~~ C	~~228.0~~ 582.4	~~2,694.3~~ 5,512.8

Notes:

a Broad Street crosses multiple railroad lines at grade in Griffith, Indiana. These railroad lines include existing CN and EJ&E rail lines. Please see Figure 2.4, above, for a schematic of the Broad Street at-grade crossing. Table 4.3-8 reports a combined delay for both the EJ&E and CN rail lines.

Page 4.3-34, Table 4.3-10:

Table 4.3-10. Substantially Affected Highway/Rail At-Grade Crossing LOS under No-Action and Proposed Action Alternatives (Year 2015)					
~~Illinois~~ County	Street	2015 ADT	Level of Service for:		
			Roadway	Crossing, No-Action (2015)	Crossing, Proposed Action (2015)
Lake, IL	Diamond Lake Road	8,998	D	A	B
Lake, IL	Old McHenry Road	32,424	F	A	A
Lake, IL	Ela Road	21,398	F	A	A
Lake, IL	Hough Street (IL 59 & 63)	24,056	F	A	A
DuPage, IL	Liberty Street	20,696	F	A	B
~~Du Page~~ DuPage, IL	Ogden Avenue (US 34)	45,828	F	A	B
DuPage, IL	Montgomery Road/ 83rd Street	27,131	F	A	B
Will, IL	135th Street	11,766	E	A	B
Will, IL	Woodruff Road	10,659	E	B	F
Will, IL	Washington Street	11,714	C	A	F
Cook, IL	Cicero Avenue	30,598	E	A	B
Cook, IL	Western Avenue	24,717	D	A	B
Cook, IL	Chicago Road	26,842	E	A	C
Cook, IL	Lincoln Highway (US 30)	39,656	F	A	B
Lake, IN	Broad Street	19,572	F	A	~~B~~ C
Lake, IL	Allanson Road	21,179	F	A	B

Page 4.3-35, Table 4.3-11:

Table 4.3-11. Substantially Affected Highway/Rail At-Grade Crossing Queue Length under No-Action and Proposed Action Alternatives (Year 2015)						
~~Illinois~~ County	Street	2015 ADT	Queue Length (feet) for:			
			No-Action	Proposed Action	Major Thoroughfare Blocked due to Proposed Action	Does Total Vehicle Traffic Delay (24-Hr), exceed 40 hours?
Lake, IL	Diamond Lake Road	8,998	384	784	IL 60 & 83	Yes
Lake, IL	Old McHenry Road	32,424	641	1,186	None[b]	Yes
Lake, IL	Ela Road	21,398	517	947	Old Rand Road	No
Lake, IL	Hough Street (IL 59 & 63)	24,056	810	1,497	Northwest Highway	No
DuPage, IL	Liberty Street	20,696	1,171	1,474	None[b]	Yes
DuPage, IL	Ogden Avenue	45,828	1,076	1,322	None[b]	Yes

Table 4.3-11. Substantially Affected Highway/Rail At-Grade Crossing Queue Length under No-Action and Proposed Action Alternatives (Year 2015)						
~~Illinois~~ County	Street	2015 ADT	Queue Length (feet) for:			
			No-Action	Proposed Action	Major Thoroughfare Blocked due to Proposed Action	Does Total Vehicle Traffic Delay (24-Hr), exceed 40 hours?
	(US 34)					
DuPage, IL	Montgomery Road/83rd Street	27,131	1,274	1,597	None[b]	Yes
Will, IL	135th Street	11,766	539	721	US 30	Yes
Will, IL	Woodruff Road	10,659	1,056	1,814	None[a]	Yes
Will, IL	Washington Street	11,714	1,550	2,371	None [a]	Yes
Cook, IL	Cicero Avenue	30,598	663	1,150	None[b]	Yes
Cook, IL	Western Avenue	24,717	528	875	None[b]	Yes
Cook, IL	Chicago Road	26,842	824	1,252	None[b]	Yes
Cook, IL	Lincoln Highway (US 30)	39,656	860	1,274	Sauk Trail	Yes
Lake, IN	Broad Street	19,572	~~901~~ 1,311	~~1,615~~ 2,211	None[b]	Yes
Lake, IL	Allanson Road	21,179	1,434	2,310	None[b]	Yes

Notes:

[a] Queues on Woodruff Road and Washington Street would increase as a result of the Proposed Action and block local streets, but they are not expected to block any major thoroughfares. SEA determined that Woodruff Road and Washington Street would be substantially affected by the increased vehicle delay and the related decreased LOS at the crossing.

[b] Queues on these roadways would increase as a result of the Proposed Action and block local streets, but they are not expected to block any major thoroughfares. SEA determined that these roadways would be substantially affected by vehicle delay exceeding 40 hours per day.

Page 4.3-47, first paragraph, second sentence:

Figures 2.4-2 through 2.4-~~14~~ 15, in Chapter 2, show the construction limits of the proposed new connections.

Page 4.3-47, fourth paragraph, third and fourth sentences:

~~The effects from the construction alternatives are discussed in Appendix E.~~ In summary, the construction alternatives proposed for all of the alternatives affect the roadway network.

Page 4.3-47, first bullet, first sentence:

- Proposed Munger Connection (see Figure 2.4-2), Munger Alternative – Original Proposal (see Figure 2.4-~~14~~).

Page 4.3-52, third paragraph, second sentence:

Because this alternative would reduce train traffic on CN rail line segments, the net effect to emergency services in communities along the CN rail line would be positive because delay and total

time that a crossing is blocked would decrease for nearly all crossings ~~and the average delay time would be lengthy~~.

Page 4.3-52, third paragraph, fourth sentence:

SEA did prepare analysis summaries for each facility within 2 miles of the CN rail line~~, however.~~; ~~They~~ they are presented in Appendix E.

Page 4.3-52, fifth paragraph, first sentence:

As described above with regard to the two-step screening process, SEA assumed that the Proposed Action would potentially affect emergency services if the facility is located within 2 miles of the EJ&E rail line and more than 1 mile from a public grade-separated crossing~~s~~, and at least one public highway/rail at-grade crossing within 2 miles of the facility would experience an increase of 30 seconds or more in average delay per delayed vehicle, or an increase of 30 minutes or more for the total daily time that the crossing would be blocked.

Page 4.3-52, seventh paragraph, first sentence:

It is generally recognized that the first 4 to 6 minutes following cardiac arrest are critical to successful resuscitation and is also a national standard of emergency response time set forth by the National Fire Protection Association (NFPA).

Page 4.3-53, first paragraph, third sentence:

For this reason, SEA used the values for 30-second average delay per delayed vehicle and 30-minute total blocked crossing time to identify which facilities could experience ~~serious~~ substantial effects as a result of the Proposed Action.

Page 4.3-53, sixth paragraph, first sentence:

Table 4.3-~~12~~ 13 below lists the emergency service response facilities that would be potentially substantially affected by the Proposed Action.

Pages 4.3-54 through -74, Table 4.3-12:

This table has been revised and updated. Please see Appendix A of this Final EIS.

Page 4.3-75, Table 4.2-13:

This table has been revised and updated. Please see Appendix A of this Final EIS.

Page 4.3-86, first paragraph, third sentence:

Effects on emergency service responders could occur as a result of the ~~p~~Proposed ~~instruction~~ Action, but could be addressed through potential mitigation activities (see Section ~~6.2.4.1~~ 6.2.3 and 6.3.3).

Page 4.3-86, first, fourth, fifth, sixth, and seventh bullets:

- ~~Munger Alternative – UP Connection (see Figure 2.4-5)~~
- ~~Matteson Alternative – Southwest Quadrant (see Figure 2.4-12)~~
- ~~Proposed Griffith Connection (see Figure 2.2-13)~~
- ~~Proposed Ivanhoe Connection (see Figure 2.2-14)~~
- Proposed Kirk Yard Connection (see Figure ~~2.2-16~~ 2.4-15)

Page 4.3-86, first sub-bullet, second sentence:

- While the proposed connection would be east of Powis Road, the reduced train speeds ~~for two trains per day~~ through this area would result in increased delay at the existing Powis Road crossing and thus could delay fire service emergency response.

Page 4.3-86, second sub-bullet, second sentence:

- While the proposed connection would be east of Powis Road, the reduced train speeds ~~for two trains per day~~ through this area would result in increased delay at the existing Powis Road crossing and thus could delay police response.

Page 4.3-87, first sub-bullet, second sentence:

- The proposed connection would result in reduced train speeds ~~for two trains per day~~ through this area and thus increase delays at the existing Illinois Route 25, Dunham Road, and Powis Road crossings.

Page 4.3-87, second sub-bullet, second sentence:

- The proposed connection would result in reduced train speeds ~~for two trains per day~~ through this area and thus increase delays at the existing Illinois Route 25, Dunham Road, and Powis Road crossings.

Page 4.3-87, third sub-bullet, third sentence:

- The reduced train speeds ~~for two trains per day~~ through this area would result in increased delay at both the existing and the new Powis Road crossings. This increased delay at these crossings could delay fire service emergency response.

Page 4.3-87, fourth sub-bullet, third sentence:

- The reduced train speeds ~~for two trains per day~~ through this area would result in increased delay at both the existing and the new Powis Road crossings. This increased delay at these crossings could delay police response.

Page 4.3-87, third bullet:

- Proposed Matteson Connection (see Figure ~~2.2-10~~ 2.4.10)

Page 4.3-87, eighth sub-bullet:

- ~~The proposed connection would have no affect on emergency services in Griffith.~~
- Griffith Volunteer Fire Department Headquarters/Station No. 1. The proposed connection would result in reduced train speeds through this area and thus increase delays at the existing East Main Street, East Lake Street, East Miller Street, and East Elm Street crossings along the EJ&E rail line, and the existing Colfax Street crossing along the CN rail line. This increased delay at these crossings could delay fire service emergency response.
- Griffith Volunteer Fire Department Station No. 2. The proposed connection would result in reduced train speeds through this area and thus increase delays at the existing East Main Street, East Lake Street, East Miller Street, and East Elm Street crossings along the EJ&E rail line, and the existing Colfax Street crossing along the CN rail line. This increased delay at these crossings could delay fire service emergency response.
- Griffith Police Department. The proposed connection would result in reduced train speeds through this area and thus increase delays at the existing East Main Street, East Lake Street, East Miller Street, and East Elm Street crossings along the EJ&E

rail line, and the existing Colfax Street crossing along the CN rail line. This increased delay at these crossings could delay police response.

Page 4.3-88, first sub-bullet:

- Gary Fire Department Station No. 9. The proposed connection would result ~~in a reduction~~ in reduced train speeds ~~for two trains per day~~ through this area and thus increase delays at the existing West 15th Avenue and West 9th Avenue crossings.

Page 4.3-88, second sub-bullet:

- Hammond Fire Department Station No. 8. The proposed connection would result ~~in a reduction~~ in reduced train speeds ~~for two trains per day~~ through this area and thus increase delays at the existing West 15th Avenue and West 9th Avenue crossings.

Page 4.3-90, second paragraph, third sentence:

With the preferred alternative for the proposed airport expansion, the EJ&E rail line would be relocated in Joliet as shown in Figure 3.3-~~3~~ 2 (Alignment 1D or Alignment 1D North Shift).

Page 4.3-90, fifth paragraph, first sentence:

The preferred alternative for the proposed airport expansion would relocate the EJ&E rail line to the northwest as shown in Figure 3.3-~~3~~ 2 (Alignment 1D or Alignment 1D North Shift) of Chapter 3.

2.14.29 Land Use

Page 4.5-1, fourth bullet, second sentence:

- These connections are: Munger Alternative – Original Proposal, Munger Alternative – UP Connection, Munger Alternative – Northwest Quadrant, Proposed Matteson Connection, and Matteson Alternative – Northeast and Southwest Quadrants. [Section ~~4.5.4.1 – .5~~ 4.5.3.2]

Page 4.5-1, fifth bullet:

- The proposed increase in rail traffic along the EJ&E rail line due to the Proposed Action would cause increased proximity effects on public lands adjacent to the line, affecting 15 forest preserves, natural areas, and sensitive habitat areas. [Section ~~4.5.3.2~~ 4.5.3.1] Increased noise and at-grade crossing delays associated with the Proposed Action would also affect 14 trails, greenways, and scenic corridors; ~~23~~ 22 local parks; and 4 Land and Water Conservation Fund properties, all of which are adjacent to the rail line. [Sections ~~4.5.3.3 – .5~~ 4.5.3.1] The Pratt's Wayne Woods Forest Preserve and the Brewster Creek Fen and Nature Preserve would be directly affected by some of the proposed Munger connection alternatives. [Section ~~4.5.4.7~~ 4.5.3.2] Because of the proximity of the proposed connections and double track, ~~11~~ 9 trails, greenways, and scenic corridors and 10 local parks would be affected. [Section ~~4.5.4.8 and .9~~ 4.5.3.2] No Land and Water Conservation Fund properties would be directly encroached on by the planned construction. The Griffith, Ivanhoe, and Kirk Yard connections would be subject to the requirements of the Coastal Zone Management Act and the Indiana Lake Michigan Coastal Program. [Sections ~~4.5.4.10 and .11~~ 4.5.3.2]

Page 4.5-1, sixth bullet:

- Neither the Proposed Action nor any of the associated construction activities, including alternatives, would permanently affect prime farmland. [Section ~~4.5.4.6~~ 4.5.3.2]

Page 4.5-3, third paragraph, third sentence:

Noise effects are discussed in Section 4.10; delays are discussed in Section 4.3.2; and Section~~s 4.5.3.2 through 4.5.3.5~~ 4.5.3 presents discussion~~s~~ of proximity impacts on public lands, trails, and parks.

Page 4.5-4, Table 4.5-1 (This is only a portion of the table):

Table 4.5-1. Public Lands Adjacent to the EJ&E Rail Line Potentially Affected by the Proposed Action

County (State)	Name	Type of Public Land	Segment	Proposed Train Traffic Change (trains per day)
DuPage (Illinois)	Pratt's Wayne Woods Forest Preserve	Forest preserve	EJ&E-12	19.0
	West Chicago Prairie Forest Preserve	Forest preserve	EJ&E-12	19.0
	Fermilab	Natural area	EJ&E-11	20.9
	Truitt-Hoff Nature Preserve	Nature preserve	EJ&E-12	19.0
	Night Heron Marsh Forest Preserve	Forest preserve	EJ&E-10A	21.1

Page 4.5-4, second paragraph, second sentence:

Proposed facilities, including greenways and trails, are evaluated for proximity effects in Section ~~4.5.4.8~~ 4.5.3.

Page 4.5-6, Table 4.5-3:

Table 4.5-3. Local Parks Potentially Affected by the Proposed Action

County	Park Name	Segment	Proposed Train Traffic Change (trains per day)
Lake (Illinois)	Hawthorn Woods Community Park	EJ&E-14C	15.0
	Lions Park	EJ&E-14C	15.0
	Citizens Park	EJ&E-14C	15.0
	Langendorf Park	EJ&E-14C	15.0
Cook (Illinois)	Algonquin Park	EJ&E-6	23.0
	Euclid Park	EJ&E-6	23.0
	Petraca Park	EJ&E-5A	24.0
DuPage (Illinois)	Reed-Keppler Park	EJ&E-12	19.0
	Pioneer Park	EJ&E-11	20.9
	Summer Lakes Park	EJ&E-11	20.9
	Frontenac Park	EJ&E-10A	23.8
	Clearwood Park	EJ&E-10A	23.8
	Andover Park	EJ&E-10A	23.8
DuPage (Illinois)	Middlebury East Park	EJ&E-10A	23.8
	Waubonsee Creek Park	EJ&E-10A	23.8
	South Spring Lake	EJ&E-10A	23.8
	Oakhurst Wetlands	EJ&E-10A	23.8
Will (Illinois)	King's Crossing	EJ&E-10E	23.8
	Future Park (Under Development)	EJ&E-10E	23.8
	Ron Rob Field	EJ&E-7B	21.9
Lake (Indiana)	~~Griffith Historical Park and Depot Museum~~	~~EJ&E-4~~	~~21.0~~
	Tot Park-Griffith	EJ&E-4	21.0
	Seberger Park	EJ&E-3	20.0

Page 4.5-7, Table 4.5-4:

Table 4.5-4. Land and Water Conservation Fund Properties Potentially Affected by the Proposed Action			
County (State)	Section 6(f) Property	Segment	Potential Proximity Effect
Cook (Illinois)	Spring Lake Nature Preserve	EJ&E-14D	+15.0 trains daily
DuPage (Illinois)	Summerlakes Park	EJ&E-11	+20.9 trains daily
	West Chicago Nature Preserve	EJ&E-12	+19.0 trains daily
Will (Illinois)	Lake Renwick Heron Rookery Forest and Nature Preserves	EJ&E-9B	+23.8 trains daily
Lake (Indiana)	Hoosier Prairie Nature Preserve	EJ&E-5B	+24.0 trains daily

Pages 4.5-7 and -8, Table 4.5-5:

Table 4.5-5. Proposed Connections and Double Track Improvements			
Construction Site	Construction Alternatives	Location	Communities
Leithton Double Track	1 Alternative	South of Allanson Road in Mundelein	Mundelein, IL Vernon Hills, IL
Diamond Lake Road to Gilmer Road Double Track	1 Alternative	East of Diamond Lake Road in Mundelein to Gilmer Road in Long Grove	Mundelein, IL Hawthorn Woods, IL Long Grove, IL
Munger Connection	5 Alternatives: 1) No-Build at Munger 2) Proposed Munger Connection 3) Munger Alternative-Original Proposal 4) Munger Alternative-UP Connection 5) Munger Alternative-Northwest Quadrant	Within Pratt's Wayne Woods Forest Preserve	Bartlett, IL Wayne , IL West Chicago, IL
East Siding to Walker Double Track	1 Alternative	• East Siding to West Wolf's Road segment (south of Liberty Street in Aurora to south of West Wolf's Crossing Road in Naperville) • Normantown to Walker segment (north of 111th Street to south of Chapins Road/127th Street in Plainfield)	Aurora, IL Naperville, IL Plainfield, IL
Joliet Connection	3 Alternatives: 1) No-Build at Joliet 2) Proposed Joliet Connection 3) Joliet Alternative-Original Proposal	West of South State Street/Lockport Road (IL 171)	Joliet, IL Lockport, IL
East Joliet to Frankfort Double Track	1 Alternative	I-80 in Joliet to west of Wolf Road in Frankfort	Joliet, IL New Lenox, IL Frankfort, IL Mokena, IL

Table 4.5-5. Proposed Connections and Double Track Improvements			
Construction Site	**Construction Alternatives**	**Location**	**Communities**
Matteson Connection	**4 Alternatives:** 1) No-Build at Matteson 2) Proposed Matteson Connection 3) Matteson Alternative-Northeast and Southwest Quadrants 4) Matteson Alternative-Southwest Quadrant	East of Main Street	Matteson, IL Park Forest, IL
Griffith Connection	**2 Alternatives:** 1) No-Build at Griffith 2) Proposed Griffith Connection	East of Broad Street	Griffith, IN
Ivanhoe Connection	**2 Alternatives:** 1) No-Build at Ivanhoe 2) Proposed Ivanhoe Connection	South of 5th Avenue (US 20)	Gary, IN
Kirk Yard Connection	**2 Alternatives:** 1) No-Build at Kirk Yard 2) Proposed Kirk Yard Connection	Within Kirk Yard	Gary, IN

Page 4.5-11, fifth paragraph:

The majority of construction would occur within the existing EJ&E and CN ROW; however, the Applicants would acquire approximately 0.10 acre of commercial land and 3.25 acres of ~~vacant land~~ open space for this connection. This parcel of ~~vacant land~~ open space is a remnant parcel between the two rail lines that is zoned for industrial uses. Because all construction would occur on land uses identified as of similar intensities, the proposed construction would not affect current land use patterns.

Page 4.5-12 and -13, Table 4.5-6 (This is only a portion of the table):

Table 4.5-6. Land Use Conversion Summary		
Construction Site	**Existing Land Uses (If Applicable)**	**Acres to be Converted to Railroad Use**
Indiana		
No-Build at Griffith	N/A	0.00
Griffith Connection	Commercial & Services ~~Vacant~~ Open Space	0.10 3.25
No-Build at Ivanhoe	N/A	0.00
Ivanhoe Connection	Commercial & Services Open Space	0.30 2.91
No-Build at Kirk Yard	N/A	0.00
Kirk Yard Connection	Transportation	2.42

Page 4.5-24, Table 4.5-9:

Table 4.5-9. Local Parks Potentially Affected by Proposed Construction				
County	**Park Name**	**Segment**	**Proposed Train Traffic Change (trains per day)**	**Proximity to Proposed Construction Site**
DuPage (Illinois)	Frontenac Park	EJ&E-10A	23.8	Adjacent; east of the East Siding double track
	Clearwood Park	EJ&E-10A	23.8	220 feet west of the East Siding double track
	Andover Park	EJ&E-10A	23.8	Adjacent; west of the East Siding double track
	Middlebury East Park	EJ&E-10A	23.8	Adjacent; west of the East Siding double track
	Waubonsee Creek Park	EJ&E-10A	23.8	Adjacent; west of the East Siding double track
	South Spring Lake	EJ&E-10A	23.8	Adjacent; east of the East Siding double track
	Oakhurst Wetlands	EJ&E-10A	23.8	Adjacent; west of the East Siding double track
Will (Illinois)	King's Crossing	EJ&E-10E	23.8	260 feet east of the East Siding double track (Normantown to Walker segment)
	Future Park (Under Development)	EJ&E-10E	23.8	300 feet east of the East Siding double track (Normantown to Walker segment)
	Ron Rob Field	EJ&E-7B	21.9	Adjacent; south of the East Joliet double track
~~Lake (Indiana)~~	~~Griffith Historical Park and Depot Museum~~	~~EJ&E-4~~	~~21.0~~	~~Adjacent; west of the Griffith connection~~

Page 4.5-25, third paragraph, first sentence:

As discussed n Section 3.5.5.8, Indiana has implemented a coastal zone management program for areas along Lake Michigan. <u>However,</u> Illinois has not <u>received approval and notice to implement their Coastal Management Zone.</u>

Page 4.5-25, fourth paragraph, first sentence:

The No-Action alternatives would not affect the Indiana <u>or proposed Illinois</u> coastal zone management area because construction or acquisition of new ROW would not occur.

Page 4.5-25, fifth paragraph:

<u>None of the connections located in Illinois are within their Coastal Zone Boundary, therefore, no impacts to this Boundary would exist from the Proposed Action.</u> The Griffith, Ivanhoe, and Kirk Yard connections are subject to two of the three LMCP components: the Indiana Coastal Nonpoint Pollution Control Plan and Federal consistency requirements (INDNR 2004a). All three connections would need to be constructed within the nonpoint pollution control plan boundary. Section 4.1.2, Water Resources, discusses nonpoint pollution and the LMCP requirements.

Page 4.5-25, sixth paragraph, first sentence:

SEA acknowledges that the following properties would experience proximity effects under the Proposed Action: ~~15~~<u>17</u> public lands; 14 existing or proposed trails, greenways and scenic corridors; ~~23~~ <u>22</u> local parks; and 4 Land and Water Conservation Fund properties.

Page 4.5-25, sixth paragraph, fourth sentence:

The three Munger alternatives, the Proposed Matteson Connection, and the Matteson Alternative – Northeast and Southwest Quadrants are not consistent with land use patterns~~,~~ and land use.~~, and~~ The Proposed Matteson Connection is not consistent with zoning and, therefore, may require a zoning amendment if constructed.

2.14.30 Socioeconomics

Page 4.6-3, second paragraph, fourth sentence:

~~The IMPLAN® model is discussed in Section 3.6, Socioeconomics.~~

Page 4.6-6, first paragraph, second sentence:

~~Indirect and induced effects are addressed in Section 3.5, Socioeconomics.~~

Page 4.6-7, Table 4.6-3:

Table 4.6-3. Property Value Effects from Increased Train Traffic on a Nearby Existing Rail Line

	Change in Property Value by Distance from Rail Line (%)								
	1 Additional Train			10 Additional Trains			20 Additional Trains		
House Size	≤250 ft.	251-500 ft.	501-750 ft.	≤250 ft.	251-500 ft.	501-750 ft.	≤250 ft.	251-500 ft.	501-750 ft.
Small (<1,250 sq. ft.)	(0.24)	(0.10)	(0.12)	(2.40)	(1.05)	(1.16)	(4.79)	(2.10)	(2.32)
Medium (1,251-1,700 sq. ft.)	(0.27)	(0.11)	(0.07)	(2.68)	(1.09)	(0.74)	(5.35)	(2.19)	(1.47)
Large (>1,700 sq. ft.)	(0.19)	n/a [a]	n/a [a]	(1.91)	n/a [a]	n/a [a]	~~3.81~~ (3.81)	n/a [a]	n/a [a]

Source: Derived from Simons and El Jaouhari, 2004.
Notes: Numbers in parentheses denote a negative change.
[a] Not statistically significant.

2.14.31 Energy

Page 4.8-1, first bullet, second sentence:

Although train operations would be more efficient, the distance traveled would be longer using the EJ&E rail line, resulting in a net increase in annual energy use, based on CN's revised fuel use estimates, of ~~631,255~~ 631,246 gallons of diesel fuel for train operations (~~639,442~~ 639,435 gallons of diesel including trucks at grade crossings).

Page 4.8-1, second bullet, first sentence:

Fuel use caused by cars and trucks idling at a highway/rail at-grade crossing would increase by approximately ~~84,242~~ 84,239 gallons of gasoline and ~~8,187~~ 8,189 gallons of diesel fuel per year in 2015.

Page 4.8-6, Table 4.8-8:

Table 4.8-8. Net 2015 Energy Use – Original Estimates					
Category	**Source**	**No Action Energy Use (MMBtu/yr)**	**Proposed Action Energy Use (MMBtu/yr)**	**Net Change in Energy Use (MMBtu/yr)**	**Net Change in Fuel Use (gallons)**
Operations	Moving CN trains (diesel)	711,847	1,056,214	344,367	2,477,460
	Moving and idling Other trains (diesel)	no data	no data	No data	No data
	Idling CN trains (diesel)	no data	no data	No data	No data
Intersection delay	Gasoline vehicles	38,696	49,142	10,446	~~84,242~~ 84,239
	Diesel vehicles	4,217	5,355	1,138	~~8,187~~ 8,189
Total		**754,760**	**1,110,711**	**355,951**	~~**2,569,889**~~ **2,569,888** [Diesel: ~~2,485,647~~ 2,485,649] [Gasoline: ~~84,242~~ 84,239]

Notes: Columns may not sum exactly due to rounding.

PAGE 4.8-7, TABLE 4.8-9:

Table 4.8-9. Net 2015 Energy Use – Revised Estimates					
Category	**Source**	**No Action Energy Use (MMBtu/yr)**	**Proposed Action Energy Use (MMBtu/yr)**	**Net Change in Energy Use (MMBtu/yr)**	**Net Change in Fuel Use (gallons)**
Operations	Moving CN trains (diesel)	711,877	976,691	264,814	~~1,905,137~~ 1,905,134
	Moving and idling Other trains (diesel)	187,063	60,384	(126,679)	~~(911,360)~~ (911,361)
	Idling CN trains (diesel)	80,248	29,857	(50,391)	~~(362,525)~~ (362,528)
Intersection delay	Gasoline vehicles	38,696	49,142	10,446	~~84,242~~ 84,239
	Diesel vehicles	4,217	5,355	1,138	~~8,187~~ 8,189
Total		**1,022,101**	**1,121,429**	**99,328**	~~**723,684**~~ **723,673** [Diesel: ~~639,442~~ 639,434] [Gasoline: ~~84,242~~ 84,239]

Notes: Columns may not sum exactly due to rounding.
Numbers in parentheses denote a negative change.

2.14.32 Air Quality and Climate

Pages 4.9-1 and -2, first bullet, fourth and fifth sentences:

- In 2015, when operational changes are expected to be fully implemented, emission changes for NO_x and VOC would increase by approximately 374 tons and ~~26~~ 20 tons, respectively, based on the Applicants' initial fuel use analysis accounting for only the projected changes in travel routes for CN trains. However, the Applicants' refined fuel use analysis, which accounts for reduced idling of CN trains, plus fuel savings by other carriers, means that net changes in NO_x and VOC emissions would be only 96 tons and ~~8~~ 6 tons, respectively, tons per year in 2015.

Page 4.9-7, Table 4.9-1:

Table 4.9-1. Emissions Caused By Active Operations Of CN Trains – Original Estimates

Pollutant	No-Action Fuel Use[a] (gal)	Proposed Action Fuel Use[a] (gal)	2015 E.F. (g/gal)	2015 No-Action Emissions (tons/yr)	2015 Proposed Action Emissions (tons/yr)
VOC	5,121,203	7,598,663	~~8.95~~ 6.59	~~50.5~~ 37.2	~~75.0~~ 55.2
CO			27.40	154.7	229.5
NO_x			136.73	771.8	1145.2
SO_2			0.10	0.56	0.84
PM_{10}			4.38	24.7	36.7
$PM_{2.5}$			4.25	24.0	35.6

Notes:

[a] Fuel use is total projected use, in gallons, under expected No-Action and Proposed Action operation alternatives, with full implementation of the Applicants' Operating Plan in 2015 under the Proposed Action scenario.

Page 4.9-8, Table 4.9-2:

Table 4.9-2. Emissions Caused by Active Operations of CN Trains – Revised Estimates

Pollutant	No-Action Fuel Use[a] (gal)	Proposed Action Fuel Use[a] (gal)	2015 E.F. (g/gal)	2015 No-Action Emissions (tons/yr)	2015 Proposed Action Emissions (tons/yr)
VOC	5,121,418	7,026,553	~~8.95~~ 6.59	~~50.5~~ 37.2	~~69.3~~ 51.0
CO			27.40	154.7	212.2
NO_x			136.73	771.9	1059.0
SO_2			0.10	0.56	0.77
PM_{10}			4.38	24.7	33.9

$PM_{2.5}$			4.25	24.0	32.9

Notes:
[a] Fuel use is total projected use, in gallons, under expected No-Action and Proposed Action operation alternatives, with full implementation of the Applicants' Operating Plan in 2015 under the Proposed Action scenario.

Page 4.9-8, Table 4.9-3:

Table 4.9-3. Emissions Caused by Active and Idling Operations of Other Carriers – Revised Estimates

Pollutant	No-Action Fuel Use[a] (gal)	Proposed Action Fuel Use[a] (gal)	2015 E.F. (g/gal)	2015 No-Action Emissions (tons/yr)	2015 Proposed Action Emissions (tons/yr)
VOC	1,345,781	434,420	~~8.95~~ 6.59	~~13.3~~ 9.8	~~4.3~~ 3.2
CO			27.40	40.6	13.1
NO_x			136.73	202.8	65.5
SO_2			0.10	0.15	0.05
PM_{10}			4.38	6.5	2.1
$PM_{2.5}$			4.25	6.3	2.0

Notes:
[a] Fuel use is total projected use, in gallons, under expected No-Action and Proposed Action operation alternatives, with full implementation of the Applicants' Operating Plan in 2015 under the Proposed Action scenario.

Page 4.9-9, Table 4.9-4:

Table 4.9-4. Emissions Caused by Idling of CN Trains – Revised Estimates

Pollutant	No-Action Fuel Use[a] (gal)	Proposed Action Fuel Use[a] (gal)	2015 E.F. (g/gal)	2015 No-Action Emissions (tons/yr)	2015 Proposed Action Emissions (tons/yr)
VOC	577,327	214,799	~~8.95~~ 6.59	~~5.7~~ 4.2	~~2.1~~ 1.6
CO			27.40	17.4	6.5
NO_x			136.73	87.0	32.4
SO_2			0.10	0.06	0.02
PM_{10}			4.38	2.8	1.0
$PM_{2.5}$			4.25	2.7	1.0

Notes:
[a] Fuel use is total projected use, in gallons, under expected No-Action and Proposed Action operation alternatives, with full implementation of the Applicants' Operating Plan in 2015 under the Proposed Action scenario.

Page 4.9-11, Table 4.9-7:

Table 4.9-7. Net 2015 VOC Operational Emissions (tons/yr) – Original Estimates				
Category	**Source**	**No-Action Emissions (2015)**	**Proposed Action Emissions (2015)**	**Net Change in Emissions (2015)**
Operations	CN active trains	~~50.5~~ 37.2	~~75.0~~ 55.2	~~24.5~~ 18.0
	Other active and idling trains	no data	no data	no data
	CN idling trains	no data	no data	no data
Intersection delay	Vehicle idling	6.4	8.1	1.7
Total		~~56.9~~ 43.6	~~83.1~~ 63.3	~~26.2~~ 19.7

Page 4.9-11, Table 4.9-8:

Table 4.9-8. Net 2015 VOC Operational Emissions (tons/yr) – Revised Estimates				
Category	**Source**	**No-Action Emissions (2015)**	**Proposed Action Emissions (2015)**	**Net Change in Emissions (2015)**
Operations	CN active trains	~~50.5~~ 37.2	~~69.3~~ 51.0	~~18.8~~ 13.8
	Other active and idling trains	~~13.3~~ 9.8	~~4.3~~ 3.2	~~(9.0)~~ (6.6)
	CN idling trains	~~5.7~~ 4.2	~~2.1~~ 1.6	~~(3.6)~~ (2.6)
Intersection delay	Vehicle idling	6.4	8.1	1.7
Total		~~75.9~~ 57.6	~~83.8~~ 63.9	~~7.9~~ 6.3

Note: Numbers in parentheses denote a negative change.

Page 4.9-15, Table 4.9-19:

Table 4.9-19. Transaction-Related Emissions Changes~~.~~						
	Original Operating Plan & Vehicles - 2015 (Tons Per Year)			**Revised Fuel Use Including Fuel Savings - 2015 (Tons Per Year)**		
	Trains	**Vehicles**	**Total**	**Trains**	**Vehicles**	**Total**
VOC	~~24.5~~ 18.0	1.7	~~26.2~~ 19.7	~~6.2~~ 4.6	1.7	~~7.9~~ 6.3
CO	74.8	13.6	88.4	19.1	13.6	32.7
NO_x	373.4	0.7	374.1	95.1	0.7	95.8
SO_2	0.28	0.005	0.291	0.07	0.005	0.08
PM_{10}	12.0	0.006	12.0	3.0	0.006	3.0
$PM_{2.5}$	11.6	0.005	11.6	2.9	0.005	2.9

Page 4.9-27, Table 4.9-30:

Table 4.9-30. VOC & NO_x Total Emissions for O_3 Compared with SIP (Tons/Summer Day) – Original Estimates								
Year	VOCs				NO_x			
	Illinois Emissions	Illinois SIP Budget	Indiana SIP Budget[a]	Net Change due to Proposed Action[b]	Illinois Emissions	Illinois SIP Budget	Indiana SIP Budget	Net Change due to Proposed Action[b]
2007	121.69	151.11	- -	- -	279.84	280.40	- -	- -
2010	91.93	127.42	11.5	0.0054	205.33	280.40	40.6	0.052
2015	- -	- -	- -	~~0.07~~ 0.054	- -	- -	- -	1.02
2020	51.29	127.42	6.00	- -	67.67	280.40	12.60	- -
2030	51.98	127.42	- -	- -	48.17	280.40	- -	- -
2040	- -	- -	7.16	- -	- -	- -	7.96	- -

Sources: Indiana Department of Environmental Management (IDEM) (2006a), Request for Redesignation and Maintenance Plan for Ozone Attainment in the 8-Hour Ozone Nonattainment Area--Lake and Porter Counties, Indiana, retrieved on May 8, 2008, http://www.in.gov/idem/programs/air/redesignations/lakeporter/lakeporterfinal.pdf, September 2006. Chicago Metropolitan Agency for Planning (CMAP) (2006c), Transportation Conformity Analysis for the PM2.5 and 8-Hour Ozone National Ambient Air Quality Standards, retrieved on June 26, 2008, http://www.cmap.illinois.gov/uploadedFiles/publications/other_publications/pm25_conformity_analysis.pdf, October 12, 2006.

Notes:

[a] Indiana's Maintenance Plan does not provide estimates of actual emissions in comparison to the Indiana budget.

[b] Net change of emissions in tons per summer day resulting from the Proposed Action was calculated by taking the previously calculated tons per year values and dividing by 365 days per year. Values for 2010 are Proposed Action-related construction emissions, and values for 2015 are Proposed Action-related operations emissions, including vehicle idling emissions at crossings.

Page 4.9-27 and -28, Table 4.9-31:

Table 4.9-31. VOC & NO_x Total Emissions for O_3 Compared with SIP (Tons/Summer Day) – Revised Estimates								
Year	VOCs				NO_x			
	Illinois Emissions	Illinois SIP Budget	Indiana SIP Budget[a]	Net Change due to Proposed Action[b]	Illinois Emissions	Illinois SIP Budget	Indiana SIP Budget	Net Change due to Proposed Action[b]
2007	121.69	151.11	- -	- -	279.84	280.40	- -	- -
2010	91.93	127.42	11.5	0.0054	205.33	280.40	40.6	0.052
2015	- -	- -	- -	~~0.021~~ 0.017	- -	- -	- -	0.26

Table 4.9-31. VOC & NO_x Total Emissions for O_3 Compared with SIP (Tons/Summer Day) – Revised Estimates								
Year	VOCs				NO_x			
	Illinois Emissions	Illinois SIP Budget	Indiana SIP Budget[a]	Net Change due to Proposed Action[b]	Illinois Emissions	Illinois SIP Budget	Indiana SIP Budget	Net Change due to Proposed Action[b]
2020	51.29	127.42	6.00	- -	67.67	280.40	12.60	- -
2030	51.98	127.42	- -	- -	48.17	280.40	- -	- -
2040	- -	- -	7.16	- -	- -	- -	7.96	- -

Sources: IDEM (2006a), *Request for Redesignation and Maintenance Plan for Ozone Attainment in the 8-Hour Ozone Nonattainment Area--Lake and Porter Counties, Indiana*, retrieved on May 8, 2008, http://www.in.gov/idem/programs/air/redesignations/lakeporter/lakeporterfinal.pdf, September 2006.
CMAP (2006c), *Transportation Conformity Analysis for the $PM_{2.5}$ and 8-Hour Ozone National Ambient Air Quality Standards*, retrieved on June 26, 2008, http://www.cmap.illinois.gov/uploadedFiles/publications/other_publications/pm25_conformity_analysis.pdf, October 12, 2006.

Notes:

[a] Indiana's Maintenance Plan does not provide estimates of actual emissions in comparison to the Indiana budget.

[b] Net change of emissions in tons per summer day resulting from the Proposed Action was calculated by taking the previously calculated tons per year values and dividing by 365 days per year. Values for 2010 are Proposed Action-related construction emissions, and values for 2015 are Proposed Action-related operations emissions, including vehicle idling emissions at crossings.

2.14.33 Noise

Page 4.10-18, Table 4.10-10:

Table 4.10-10. Predicted Vibration Effect Distances at Measurement Sites

Measurement Site		EJ&E Segment	Closest Arterial Street	Trains[a]		Weighted Average Train Speed (mph)		Maximum Train Speed (mph)		Lmax at 75 ft (VdB)[b]	Effect Threshold (VdB)[c]	Effect Distance (ft)[d]
				Existing	Future	Existing	Future	Existing	Future			
V1.	Lake Zurich, IL	14	Main Street	5.3	20.3	31	31	33	36	72.4	72	80
V2A.	Barrington, IL A	14	Northwest Hwy.	5.3	20.3	37	39	40	40	72.4	72	80
V2B.	Barrington, IL B[e]	14	Main Street	5.3	20.3	37	39	40	40	82.2	72	170
V2C.	Barrington, IL C	14	Main Street	5.3	20.3	37	39	40	40	72.4	72	80
V2D.	Barrington, IL D	14	West Hillside Avenue	5.3	20.3	37	39	40	40	72.4	72	80
V3.	Hoffman Estates, IL	14	Shoe Factory Road	5.3	20.3	36	37	40	45	72.4	72	80
V4B.	Warrenville, IL	11	Batavia Road	10.7	31.6	38	41	45	45	72.4	72	80
V5.	Aurora, IL	10	Ogden Avenue	15.7	39.5	35	40	45	45	72.4	72	80
V6.	Crest Hill, IL	9	Gaylord Street	18.5	42.3	31	34	44	44	72.4	72	80
V7A.	Joliet, IL	8	Woodruff Street	18.5	42.3	9	10	10	10	72.4	72	80
V8.	Matteson, IL	7	Main Street	~~6.4~~ 8.6	~~28.3~~ 34.6	~~38~~ 29	~~41~~ 18	43	45	72.4	72	80
V9A.	Chicago Heights, IL	6	Western Avenue	8.6	31.6	24	30	45	30	76.6	72	130
V9B.	Dyer, IN	6	Calumet Avenue	10.2	34.2	35	25	35	45	76.6	72	210
V10A.	Griffith, IN[f]	4	Broad Street	7.6	~~28.6~~ 23.6	24	25	25	25	82.2	72	210
V10B.	Griffith, IN[g]	4	Broad Street	7.6	~~28.6~~ 23.6	~~24~~ 17	~~25~~ 17	25	25	82.2	72	210
V12.	Griffith, IN	4	45th Avenue	7.6	28.6	24	25	25	25	76.6	72	130
V13	Gary, IN	4	15th Avenue	9.7	29.7	38	38	45	45	76.6	72	130

Notes:

[a] Average number of freight trains per day.

[b] Maximum RMS vibration level averaged over a 15-second interval. Levels given in decibels (VdB) using a decibel reference of 1µin/sec.

[c] Effect threshold for maximum rail car vibration.

[d] Distance measured from centerline of closest track.

[e] Sites close to special trackwork, therefore vibration levels are higher here than they are in areas that are not adjacent to special trackwork.

[f] Measurement was conducted in February 2008.

[g] Measurement was conducted in April 2008.

Page 4.10-19, Table 4.10-11:

Table 4.10-11. Predicted Vibration Effect Distances for each EJ&E Segment, Standard Track

City	EJ&E Segment	Closest Arterial Street	Trains[a]		Maximum Train Speed (mph)[b]		Effect Threshold (VdB)[c]	Effect Distance (ft)
			Existing	Future	Existing	Future		
Gary	2	5th Avenue	9.8	29.8	45	45	72	130
Gary (V13)	3	15th Avenue	9.7	29.7	44	45	72	130
Griffith	4	40th Pl.	7.6	28.6	44	43	72	130
Griffith (V12)	4	Elm Street	7.6	28.6	42	32	72	130
Griffith (V10)	4	Broad Street	7.6	~~28.6~~ 23.6	25	25	72	210
Schererville	5	Kennedy Avenue	10.2	34.2	40	45	72	210
Dyer (V9B)	5	Hart Street	10.2	34.2	45	30	72	210
Sauk Village	5	Torrance Avenue	10.2	34.2	44	45	72	210
Ford Heights[d]	5	Bishop Ford Fwy.	10.2	34.2	45	30	72	210
Ford Heights[e]	5	Bishop Ford Fwy.	10.2	34.2	45	30	72	130
Chicago Heights	6	East End	8.6	31.6	21	23	72	130
Park Forest A (V9A)	6	Western Avenue	8.6	31.6	35	45	72	130
Matteson[f]	6	Main Street	~~6.4~~ 8.6	~~28.3~~ 34.6	43	45	72	130
Matteson[g] (V8)	7	Main Street	~~6.4~~ 8.6	~~28.3~~ 34.6	43	45	72	80
Frankfort	7	Harlem Avenue	6.4	28.3	45	45	72	80
New Lenox	7	S. Gougar Road	6.4	28.3	45	31	72	80
Joliet	7	Cherry Hill Road	6.4	28.3	45	33	72	80
Joliet Yard (V7A)	8	Woodruff Street	18.5	42.3	10	10	72	80
Crest Hill (V6)	9	Division Street	18.5	42.3	44	44	72	80
Plainfield	9	135th Street	18.5	42.3	42	45	72	80
Plainfield	10	Hafenrichter Road	15.7	39.5	44	45	72	80
Aurora (V5)	10	Ogden Avenue US 34	15.7	39.5	45	45	72	80
Naperville	11	Diehl Road	10.7	31.6	45	45	72	80
Warrenville (V4B)	11	Batavia Road	10.7	31.6	45	45	72	80
West Chicago	11	Aurora Street	10.7	31.6	30	30	72	80
West Chicago	12	Hawthorne Lane	4.4	23.4	35	45	72	80

Table 4.10-11. Predicted Vibration Effect Distances for each EJ&E Segment, Standard Track								
			Trains[a]		Maximum Train Speed (mph)[b]			
Wayne	12	Army Trail Road	4.4	23.4	45	45	72	80
Elgin	13	W. Bartlett Road	5.5	22.5	45	45	72	80
Elgin	14	Spaulding Road	5.3	20.3	45	45	72	80
Hoffman Estates (V3)	14	Shoe Factory Road	5.3	20.3	40	45	72	80
Barrington (V2D)	14	W. Hillside Avenue	5.3	20.3	40	40	72	80
Barrington (V2C)	14	Main Street	5.3	20.3	40	40	72	80
Barrington (V2A)	14	Northwest Hwy.	5.3	20.3	40	45	72	80
Barrington	14	Lake Zurich Road	5.3	20.3	40	45	72	80
Lake Zurich (V1)	14	Main Street	5.3	20.3	33	36	72	80
North Chicago	14	--	3.2	3.2	--	--	No Change	No Change

Notes:

[a] Average number of freight trains per day.

[b] The maximum speed of all freight trains was considered and the highest value was reported

[c] Effect threshold for maximum rail car vibration.

[d] East of Bishop Ford Freeway.

[e] West of Bishop Ford Freeway.

[f] East of Main Street.

[g] West of Main Street.

2.14.34 Biological Resources

Page 4.11-1, fourth bullet, fifth sentence:

Construction activities for ~~all~~ these two configurations of the ~~Matteson~~ Munger connection would contribute to a loss of habitat at Powis Marsh and Brewster Creek, which could result on reduced breeding activity of marsh and grassland birds and wetlands reptiles. [Section 4.11.4.3] The Munger Alternative - Northwest Quadrant would not take place within an Illinois Natural Area Inventory (INAI) site, but would affect Forest Preserve District lands and could contribute to a loss of habitat to marsh and grassland birds and wetlands reptiles, which could result in reduced breeding activity of marsh and grassland birds. The Munger Alternative - UP Connection would directly affect the Brewster Creek Fen INAI and Nature Preserve Site. Additionally, the state-listed Blanding's turtle could also be affected by the Munger connection.

Page 4.11-8, second paragraph, second, third, and fourth sentences:

The USFWS states that as trains operate on this segment, vibration of the tracks and vertical deflection of the rail bed causes native sediments to be pushed ~~from the overlying rail bed into the~~ into the cracks and fissures of the underlying dolomite bedrock, causing adverse impacts to larval Hine's emerald dragonfly (USFWS 2008a). Additionally, the USFWS has a recognized concern for potential impacts to adult individuals of this species due to train/species collisions where trains travel at high speeds during adult flight season. To minimize these impacts, EJ&E has agreed to keep train speeds between 4 and 6 mph at all times on EJ&E Segment 18 in order to reduce vibration impacts to the larvae. The reduced operational speeds also minimize the likelihood of adult mortality due to direct collisions with trains. The Proposed Action would not change operations on the Paul Ales Branch, so larval and adult Hine's emerald dragonfly habitat would not be affected beyond current operations.

Pages 4.11-9 and -10, Table 4.11-12 (This is only a portion of the table):

Table 4.11-12. Potential Effects on State-Listed Species Along the EJ&E Rail Line

Guild[a]	Common and Scientific Name	Status[b] (State)	Segment[c]	Potential Effect
Grassland bird species	Henslow's sparrow (*Ammodramus henslowii*)[d]	T (IL)	EJ&E-13A, 13B, 12,5A	Noise or train collision
		~~E (IN)~~	~~EJ&E 4~~	
	Short-eared owl (*Asio flammeus*)	E (IL)	EJ&E-12, 13B	
	Upland sandpiper (*Bartramia longicauda*)	E (IN)	EJ&E-2	
Rookery bird species	Black-crowned night heron (*Nycticorax nycticorax*)	E (IL)	EJ&E-9B, 1, 10A, 12, 13B EJ&E-14C EJ&E-15, EJ&E-22	Noise or train collision
Grassland animal species	Franklin's ground squirrel (*Spermophilus franklinii*)	E (IN)	EJ&E-0, 1, 2, 3, 20, 21, 22	Train collision

Notes:
[a] A guild is a functional category based on species' common life history traits and habitat requirements.
[b] E = endangered, T = threatened
[c] See Figure 3.1-1 for locations of the EJ&E segments.
[d] Henslow's sparrow may be present along CN segment 33 at Oak Ridge County Park or CN segment 23A at Hoosier Prairie.

Page 4.11-13, fifth paragraph, fifth bullet:

- Impacts to the Hines emerald dragonfly from ground vibration near the Paul Ales Branch are not expected to change as current operating agreements with the USFWS would continue. There will be no change to the existing conditions along the Paul Ales Branch (See Biological Report in Appendix A8 of this FEIS).

Page 4.11-14, Munger bullet, third paragraph, second sentence:

Construction of this alternative would potentially affect 0.6 acre of rail bed, 1.6 acres of rail embankment overgrown with woody and herbaceous growth, 1.9 acres of Powis Marsh dominated by ~~giant reed (*Arundo donax*)~~ common reed (*Phragmites australis*) and reed canary grass and 0.8 acre of immature upland forest.

Page 4.11-15, third paragraph, fifth sentence:

Two wetland areas would be affected, 0.3 acre of wet meadow west of Powis Road, and 0.6 acre of ~~giant~~ common reed marsh associated with a small tributary of Brewster Creek connected by culverts under both EJ&E and CN rail lines.

Page 4.11-16, second paragraph, first sentence:

Construction would affect a total of ~~22.5~~ 27.0 acres, with ~~8.9~~ 13.2 acres currently in road, pavement, building, or railroad. The remaining 13.7 acres are dominated by a mix of culturally-dominated landcover types. Forested areas are comprised of immature forest, with ~~4.1~~ 4.2 acres of immature upland forest and 6.6 acres of wet forest.

Page 4.11-17, second paragraph:

Wildlife. Construction of the connections would require the removal of wildlife habitat adjacent to the existing rail line, adversely affecting individuals species utilizing these patches of habitat. Some connections would require additional ROW acquisition. Wildlife species living ~~in patches of natural habitat~~ within the construction limits ~~along segments of the EJ&E rail line that would undergo connection construction~~ would be displaced. Displacement would require mobile wildlife species to move to adjacent, available habitat. Where adjacent habitat is either occupied or inappropriate, individual species may experience declines in local populations. Additional permanent adverse effects to wildlife at all construction sites may include direct loss of individuals at various life states, and increased fragmentation. ~~Because the affected wildlife habitat is generally minor and wildlife is mobile, SEA determined the construction of the connections would not affect wildlife.~~ Wildlife may also experience temporary increases in noise during construction.

Page 4.11-17, third paragraph, second and third sentences:

Construction activities for all configurations of the ~~Matteson~~ Munger connection would cause a temporary increase in noise within or adjacent to the Pratt's Wayne Woods Forest Preserve. Construction would cause a~~n~~ ~~in~~direct impact due to loss of habitat at Powis Marsh and Brewster Creek.

Page 4.11-23, first paragraph, fourth sentence:

Because wildlife is mobile, SEA determined the double track construction ~~would not affect wildlife~~ may displace wildlife and increase mortality due to train collisions.

Page 4.11-25, third bullet, first sentence:

Wetland plant communities ~~occur near the proposed Diamond Lake to Gilmer Road double track~~ occur along all segments of the EJ&E and do occur within many of the construction areas.

2.14.35 Water Resources

Page 4.12-6, second paragraph:

Table 4.12-1, below, identifies lakes, fens, wetlands, and natural areas that lie within 1,000 feet of the EJ&E rail line where the estimated direction of near-surface groundwater flows from the EJ&E rail line toward the resource.

Page 4.12-6, Table 4.12-1 (This is only a portion of the table):

Table 4.12-1. Potentially Affected Lakes and Preserves	
Rail Segment[a]	Lakes and Preserves Within 1,000 Feet of Rail and in Direction of Presumed Near Subsurface Groundwater Flow
EJ&E-02	~~None~~ Ivanhoe Dune and Swale, Ivanhoe Dunes.

Notes:
[a] Rail segments ordered counter-clockwise along EJ&E rail line

Page 4.12-18, fifth paragraph, first and second sentences:

SEA identified and analyzed 22 structures requiring extension.~~, 19 of which were analyzed. The other three structures had insufficient structure information to complete the analysis.~~

Page 4.12-21, fifth bullet, first, second, and third sentences:

For the East Joliet to Frankfort double track area, SEA identified and analyzed 22 structures requiring extension. ~~Seventeen structures were analyzed. Structure information was insufficient for analysis of the remaining five structures.~~

Page 4.12-42, third paragraph, second sentence:

Construction would occur within a mixed Palustrine Emergent wetland with a mix of communities that appears to include shrub swamp, and a marsh dominated by ~~giant~~ common reed and reed canary grass.

Page 4.12-42, sixth paragraph, second sentence:

This proposal includes a wide, sweeping curve on a berm connecting the grade-separated tracks and would require the Applicants to fill 4.80 acres of mostly monotype (~~R~~reed ~~C~~canary ~~G~~grass and ~~Giant~~ common ~~R~~reed) marsh.

Page 4.12-44, Table 4.12-7 (This is only a portion of the table):

Table 4.12-7. Corrected Wetland Effects from Proposed Connections								
Construction Site	Wetland ID	Rail Line Segment(s)	County	Jurisdiction (USACE Tributary)a	Map Sources	NWI Type	Acreage	Total Acreage
Proposed Griffith Connection	Wetland 9a	EJ&E 4 and CN 33	Lake	IDEM	1, 6	PEMC/ PSSC/ PFOC	0.77	0.77

Source: 1) National Wetlands Inventory, 2) Lake County, Illinois, Wetland Inventory and ADID Wetland Inventory, 3) DuPage County Wetland Inventory, 4) Lake County Land Use Cover, 5) Northeastern Illinois Land Use Cover, 6) Lake County, Indiana, National Wetlands Inventory, 7) Lake County, Indiana, ADID Wetland Inventory

Notes:
[a] USACE: U.S. Army Corps of Engineers, LCSMC: Lake County Stormwater Management Commission, DSMC: DuPage County Stormwater and Flood Plain Ordinance-Special Management Area, WCLU: Will County Land Use Department
[b] Based on available data, SEA did not identify wetlands that would be affected by construction of the Joliet, Ivanhoe, and Griffith alternatives. Field surveys would be required during final design.

Page 4.12-45, sixth and seventh paragraphs:

Proposed Joliet Connection. SEA's review of available wetland data indicated no wetlands within the area of construction.

Joliet Alternative – Original Proposal. SEA's review of available wetland data indicated no wetlands within the area of construction.

Page 4.12-46, fourth paragraph, first sentence:

Proposed Ivanhoe Connection. This proposed connection would transect an excavated basin. The basin appears to be overgrown with ~~giant~~ common reed and is in an area of mixed dune and swale preserves, residential development, industry, and storage yards.

Page 4.12-46, seventh paragraph, fifth sentence:

A site visit and aerial photo analysis suggests vegetation is dominated by cattails and invasive ~~giant~~ common reed.

2.14.36 Cultural Resources

Page 4.13-1, first bullet, first sentence:

- SEA analyzed the potential impact of the Proposed Action and the associated construction of new rail connections and double track on historic properties in the Area of Potential Effect that are on or are eligible to be placed on the National Register of Historic Places.

Page 4.13-2, third paragraph, first sentence:

The Proposed Action alternative consists of the construction of six proposed rail connections and ~~four~~ five proposed double tracks and/or siding extensions.

Page 4.13-2, eighth paragraph, third sentence:

In addition, the railroad-related building and three historic buildings located along Main Street immediately east of the CN tracks are also outside the project APE.

2.14.37 Chapter 5 of the Draft EIS

Page 5-22, second paragraph, second sentence:

SEA also reviewed the environmental documents associated with the runway extension, including the Final EIS and the Record of Decision prepared by the Federal ~~Airline~~ Aviation Administration (FAA), to determine whether the ~~combined~~ effects of the two projects would result in cumulative effects.

2.14.38 Chapter 9 of the Draft EIS

Page 9-17, second paragraph, second sentence:

The public can also review printed copies of the Draft EIS at the ~~49~~ 51 public libraries and one village hall that are located in the communities along the EJ&E rail system, listed in Table 9.5-1, below.

Page 9-17 through -19, Table 9.4-1:

Table 9.4-1. Locations to Review the Draft EIS		
Community	**Public Library or Village Hall**	**Address**
Illinois (alphabetical listing)		
Aurora, Illinois	Aurora Public Library	233 S. Constitution Dr., Aurora, IL 60506
Barrington, Barrington Hills, and South Barrington, Illinois	Barrington Area Library	505 N. Northwest Hwy., Barrington, IL 60010
Bartlett, Illinois	Bartlett Public Library	800 S. Bartlett Rd., Bartlett, IL 60103
Blue Island, Illinois	Blue Island Public Library	2300 York St., Blue Island, IL 60406
Bolingbrook, Illinois	Fountaindale Public Library in Bolingbrook	300 W. Briarcliff Rd., Bolingbrook, IL 60440
Buffalo Grove, Illinois	Indian Trails Public Library	355 Schoenbeck Rd., Wheeling, IL 60090
Carbondale, Illinois	Carbondale Public Library	405 W. Main St., Carbondale, IL 62901
Centralia, Illinois	Centralia Public Library	515 E. Broadway, Centralia, IL 62801
Champaign, Illinois	Champaign Public Library	200 W. Green St., Champaign, IL 61820
Chicago, Illinois	Harold Washington Library Center	400 S. State St., Chicago, IL 60605
Chicago Heights, Illinois	Chicago Heights Public Library	25 W. 15th St., Chicago Heights, IL 60411
Crest Hill, Illinois	Crest Hill Public Library	1298 Theodore St., Crest Hill, IL 60403
Crystal Lawns, Fairmont, and Joliet, Illinois	Joliet Public Library	150 N. Ottawa St., Joliet, IL 60432
Deer Park, Hawthorn Woods, Lake Zurich, Long Grove, and Mettawa, Illinois	Ela Area Public Library	275 Mohawk Trail, Lake Zurich, IL 60047
Elgin, Illinois	Gail Borden Public Library	270 N. Grove Ave., Elgin, IL 60120
Frankfort, Illinois	Frankfort Public Library	Pfeiffer Rd. at Rt. 30, Frankfort, IL 60423
Glen Ellyn, Illinois	Glen Ellyn Public Library	400 Duane St., Glen Ellyn, IL 60137
Green Oaks and Libertyville, Illinois	Cook Park Public Library	413 N. Milwaukee Ave., Libertyville, IL 60048
Hoffman Estates, Illinois	Hoffman Estates Branch Library	1550 Hassell Rd., Hoffman Estates, IL 60169
Indian Creek and Vernon Hills, Illinois	Vernon Hills Village Hall	290 Evergreen Dr., Vernon Hills, IL 60061
Lake Bluff, Illinois	Lake Bluff Public Library	123 E. Scranton Ave., Lake Bluff, IL 60044
Lockport, Illinois	Lockport Public Library	121 E. 8th St., Lockport, IL 60441
Lynwood, Illinois	South Cook ISC 4 Library	253 W. Joe Orr Rd., Chicago Heights, IL 60411
Matteson, Illinois	Matteson Public Library	801 S. School Ave., Matteson, IL 60443
Minooka, Illinois	Three Rivers Public Library-Minooka Branch	109 N. Wabena Ave., Minooka, IL 60447
Mokena, Illinois	Mokena Public Library	11327 W. 195th St., Mokena, IL 60448
Mundelein, Illinois	Fremont Public Library	1170 N. Midlothian Rd., Mundelein, IL 60060
Naperville, Illinois	95th Street Library	3015 Cedar Glade Dr., Naperville, IL 60564
Naperville, Illinois	Naper Boulevard Library	2035 S. Naper Blvd., Naperville,

Table 9.4-1. Locations to Review the Draft EIS		
Community	**Public Library or Village Hall**	**Address**
		IL 60565
Naperville, Illinois	Nichols Library	200 W. Jefferson Ave., Naperville, IL 60540
New Lenox, Illinois	New Lenox Public Library	120 Veterans Pkwy., New Lenox, IL 60451
North Chicago, Illinois	North Chicago Public Library	2100 Argonne Dr., North Chicago, IL 60064
Park Forest, Illinois	Park Forest Public Library	400 Lakewood Blvd., Park Forest, IL 60466
Plainfield, Illinois	Plainfield Public Library	15025 S. Illinois St., Plainfield, IL 60544
Richton Park, Illinois	Richton Park Public Library	4045 Sauk Trail, Richton Park, IL 60471
Rockdale, Illinois	Will County Law Library	14 W. Jefferson St., Joliet, IL 60432
Romeoville, Illinois	Fountaindale Public Library in Romeoville	201 Normantown Rd., Romeoville, IL 60446
Sauk Village, Illinois	McConathy Public Library	21737 Jeffrey Ave., Sauk Village, IL 60411
Warrenville, Illinois	Warrenville Public Library	28W751 Stafford Pl., Warrenville, IL 60555
Waukegan, Illinois	Waukegan Public Library	128 N. County St., Waukegan, IL 60085
Wayne, Illinois	St. Charles Public Library	1 S. 6th Ave., St. Charles, IL 60174
West Chicago, Illinois	West Chicago Public Library	118 W. Washington St., West Chicago, IL 60185
Wheaton, Illinois	Wheaton Public Library	225 N. Cross St., Wheaton, IL 60187
Indiana (alphabetical listing)		
East Chicago, Indiana	Robert A. Pastrick Branch Library	1008 W. Chicago Ave., East Chicago, IN 46312
Gary, Indiana	Gary Public Library	220 W. 5th Ave., Gary, IN 46402
Griffith, Indiana	Lake County Public Library-Griffith Branch	940 N. Broad St., Griffith, IN 46319
Hammond, Indiana	Hammond Public Library	564 State St., Hammond, IN 46320
Hammond, Indiana	E.B. Hayward Branch Hammond Public Library	1212 172nd St., Hammond, IN 46320
Hammond, Indiana	Howard Branch Hammond Public Library	7047 Grand Ave., Hammond, IN 46320
Munster, Indiana	Munster Branch Lake County Public Library	8701 Calumet Ave., Munster, IN 46321
Schererville, Indiana	Dyer-Schererville Branch, Lake County Public Library	1001 W. Lincoln Hwy., Schererville, IN 46375
Whiting, Indiana	Whiting Public Library	1735 Oliver St., Whiting, IN 46394

2.14.39 References in the Draft EIS

2.14.40 Land Use

Page R-12:

DuPage County

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