

## Chapter 4

# Final Recommended Conditions

SEA identified both potential beneficial and adverse environmental effects associated with the Proposed Action during its environmental review. Chapter 4 presents the final environmental mitigation measures that SEA recommends the Board impose as environmental conditions, should it approve the Proposed Action. These mitigation measures address the potential adverse environmental effects that SEA determined could be significant, and include the voluntary mitigation measures supplied by the Applicants.

### 4.1 Overview of SEA's Approach

In conducting the environmental review, SEA has taken a hard look at the environmental consequences of the Proposed Action and alternatives as required by the National Environmental Policy Act of 1969, as amended (NEPA). SEA's final environmental mitigation recommendations reflect the variety and complexity of the environmental issues and offer a reasonable and feasible way of minimizing some of the environmental effects discovered. SEA developed these recommendations after completing a thorough, independent analysis of the potential environmental effects. This environmental analysis included:

- Careful and thorough review of all public comments
- Consultations with Federal, tribal, regional, state, and local agencies
- Full consideration of environmental and railroad operating information
- Extensive site visits
- Comprehensive public outreach that included environmental justice communities

#### 4.1.1 Limits of Conditioning Power

The Board has authority to impose conditions to mitigate potential environmental effects, but that authority is not limitless. As a government agency, the Board can only impose conditions that are consistent with its statutory authority. Any conditions that the Board imposes must relate directly to a specific transaction, be reasonable, and be supported by the record before the Board. The Board's practice consistently has been to mitigate only those impacts that result directly from a proposed action. The Board does not require mitigation for existing environmental conditions, such as the effects of current railroad operations.

#### 4.1.2 Voluntary Mitigation and Negotiated Agreements

SEA encourages applicants to propose voluntary mitigation. In some situations, voluntary mitigation can replace mitigation that the Board might otherwise impose. Because applicants seeking Board authority may gain substantial knowledge about the issues involved during project planning, and because they consult with regulatory agencies and communities during the regulatory process, applicants often propose detailed, relevant voluntary mitigation, as is the case here. SEA presents the Applicants' voluntary mitigation in Section 4.3, below.

As an alternative to the mitigation that the Board might unilaterally impose upon applicants, SEA encourages applicants to negotiate mutually acceptable agreements with affected communities and other government entities to address potential environmental effects, if appropriate. Negotiated agreements can be with neighborhoods, communities, cities, counties, regional coalitions, states, or other entities. The Applicants have reached a negotiated agreement with Joliet, Illinois (Applicants and City of Joliet 2008), and Crest Hill, Illinois (Applicants and City of Crest Hill 2008) and SEA recommends that the Board impose conditions (see Condition 65 and 66, below) requiring that the Applicants comply with the terms of those agreements as committed to in their voluntary mitigation (see VM 27, below). The Applicants state they are actively negotiating with affected communities and remain willing to negotiate with any community that seeks to do so (Applicants 2008a). If the Applicants submit any negotiated agreements with communities or other entities to the Board following publication of this Final EIS, the Board then would require compliance with the terms of any such agreements. The negotiated agreement would supersede any local mitigation that the Board might otherwise impose for that particular community or other entity.

## **4.2 SEA's Process in Developing Final Conditions**

SEA studied the effects of the Proposed Action as well as the Applicants' proposed connections and their alternative alignments. In the Draft EIS, SEA presented its analysis and proposed mitigation measures for the potential environmental effects. In addition, SEA presented the Applicants' voluntary mitigation, verbatim, from their letter dated June 26, 2008 (Applicants 2008b). In the Draft EIS, SEA asked the public and the agencies for comments on all aspects of the proposed mitigation, and for alternative mitigation options, including alternatives to requiring grade-separated crossings at all of the highway/rail at-grade crossings identified as substantially affected in the Draft EIS.

In their Draft EIS comment letter dated September 30, 2008, the Applicants submitted updated voluntary mitigation measures to SEA for the Board to consider in issuing its final decision (Applicants 2008a). The Applicants refined and supplemented their 70 voluntary mitigation measures from their letter dated June 26, 2008 (Applicants 2008b), and included additional measures proposed by SEA in the Draft EIS. The Applicants anticipate spending \$60 million on mitigation (Applicants 2008a). In Section 4.3, below, SEA presents the Applicants' 101 voluntary mitigation measures (identified by the Applicants as VM #), verbatim, from their letter dated September 30, 2008 (Applicants 2008a). The Applicants organized the individual mitigation measures by the Environmental Impact Categories found in the Corrected Final Scope of Study, served April 28, 2008 (FR 2008). The Applicants state that they plan to implement their voluntary mitigation within 3 years after the Board's approval of the Proposed Action or within 3 years after the completion of the capital improvements described in the Operating Plan (Applicants 2007a).

On November 13, 2008 (Applicants 2008d), the Applicants provided SEA with additional voluntary mitigation to deal with the issues involving Federally- or state-listed threatened or endangered species or other species of concern, which also is included in Section 4.3, below. In total, the Applicants have proposed 108 voluntary mitigation measures.

SEA has reviewed all voluntary mitigation measures, and should the Proposed Action be approved, SEA recommends that the Board require the Applicants to comply with all voluntary mitigation measures submitted (see Condition 1, below). In some cases, SEA has recommended additional conditions intended to enhance or modify some of the Applicants' voluntary mitigation measures (presented in Section 4.4, below).

As previously noted, the Applicants entered into negotiated agreements with the City of Joliet as of August 25, 2008 (Applicants and City of Joliet 2008) and the City of Crest Hill as of November 18, 2008 (Applicants and City of Crest Hill 2008). SEA recommends that the Board require the

Applicants to comply with the Joliet and Crest Hill negotiated agreements as shown in the conditions set forth below.

Based on comments received on the Draft EIS from the public, agencies, other railroads, and the Applicants, SEA re-evaluated the effects of the Proposed Action in this Final EIS where new data or new information was provided by the commenter. Chapter 2, Revised Information, contains all of the revised information, any additional analyses, and errata to the Draft EIS.

The remainder of this section summarizes the potential environmental effects, if any, on each resource area attributable to the Proposed Action, and presents SEA's rationale for recommending mitigation beyond what is offered by the Applicants, if applicable. SEA's final recommended environmental mitigation, in Section 4.4, addresses potentially substantial effects from the Proposed Action not addressed by the Applicants' voluntary mitigation. For convenience, the final recommended mitigation measures set out in Section 4.4 are identified with a number, and organized by the section headings in Chapter 4 of the Draft EIS. For some environmental resource areas analyzed in the Draft EIS (such as navigation and navigable waterways), SEA concluded that the effects of the Proposed Action would be negligible and proposed no mitigation. In other areas, SEA concluded that the Applicants' voluntary mitigation was sufficient and proposed no additional recommendations or only proposed recommendations for construction-related effects (such as passenger rail safety, hazardous waste sites, socioeconomic, and energy). Sometimes, SEA removed mitigation originally proposed in the Draft EIS if the Applicants' voluntary mitigation was sufficient, if the agencies or other commentors did not feel it was appropriate, and/or if the mitigation was replaced with another condition. SEA also included recommended mitigation for effects related to Applicants' proposed construction activities set out in Section 4.4.10, below. In most conditions, SEA uses the term "transaction"<sup>1</sup> to refer to the Proposed Action. Table 4.2-3 summarizes SEA's final recommended conditions by resource area.

SEA notes that even with all of SEA's final recommended conditions, the Proposed Action still would have adverse environmental effects that could not be fully mitigated. For example, horn noise from train operations could not be fully mitigated without compromising safety. Even with mitigation, there could be vehicle delays at highway/rail at-grade crossings, visual effects on forest preserves, and construction-related effects on wetlands and riparian habitat. However, many of the potential effects (such as vehicle delay) pertain to existing conditions that are present today. Moreover, at the same time that the Applicants would increase rail traffic along the EJ&E rail line as a result of the Proposed Action, there would be corresponding decreases in rail traffic, and potential environmental benefits, in communities where CN rail traffic is routed today. The traffic reductions would not necessarily be permanent, however. Applicants could decide to reintroduce more trains back onto the CN rail lines at some point in the future if the demand for Applicants' service increases beyond what is reasonably foreseeable today.

#### **4.2.1 Rail Operations**

SEA concluded that there would be no substantial adverse effects on rail operations attributable to the Proposed Action if recommended mitigation measures are implemented. In addition to the Applicants' voluntary measures (see Section 4.3) and/or as supplements to them, SEA recommends its final additional conditions related to rail operations in Section 4.4, based on the Draft EIS analysis, public input, and further analysis as described in Chapter 2, Revised Information.

The Applicants propose voluntary measure (VM) 35, which states that they shall operate trains in accordance with U.S. Operating Rule No. 526 (Public Crossings). This provides in part that a public

---

<sup>1</sup> Transaction refers to the proposed acquisition by the Applicants of control of EJ&E West Company.

crossing must not be blocked longer than 10 minutes unless it cannot be avoided, and if the blockage would be likely to exceed this time, then the train shall be promptly cut (separated in two and opened across the highway/rail at-grade crossing) to clear the blocked crossing or crossings. Additionally, the Applicants propose VM 36, which states that the Applicants shall develop and submit to SEA a report on frequency and duration of train delay at crossings for a period covering the first 3 years of operational changes. SEA recommends Conditions 2 and 3 (in Section 4.4) to enhance the Applicants' commitment to prevent or reduce blocked highway/rail at-grade crossings.

In response to Metra's concerns, SEA recommends mitigation in addition to VM 40 regarding the pedestrian tunnel and Front Street access at the Metra train station in Matteson, Illinois (see Condition 42).

## **4.2.2 Rail Safety**

### **4.2.2.1 Safety Integration Plan**

Pursuant to the Board's regulations at 49 CFR 1106, the Applicants prepared a Safety Integration Plan (SIP) that specifically addresses the process the Applicants propose to safely integrate the two rail systems. The Applicants filed the SIP with the Board on December 28, 2007, and submitted the SIP to the Federal Railroad Administration (FRA) for review (Applicants 2007b). On June 27, 2008, the Applicants submitted a revised version of their SIP addressing certain points raised by FRA. The Draft EIS provided the Applicants' SIP in Appendix D.

SEA has independently reviewed both versions of the SIP. On September 12, 2008, FRA found that the Applicants' SIP satisfactorily addresses requirements under 49 CFR 244.13 (FRA 2008). Consistent with the Board's practice, if the Proposed Action is approved, SEA recommends the Board impose conditions requiring the Applicants to comply with the terms of the SIP (which may continue to be modified) until FRA advises the Board that this Transaction has been safely implemented (see Conditions 4 and 5).

### **4.2.2.2 Freight Rail Safety**

SEA determined that under the Proposed Action, the potential for accidents involving railroad equipment on the CN rail lines would decrease and the potential for accidents on the EJ&E rail line would increase, although the predicted number of additional accidents would be small, less than one additional accident per year. Although the Applicants did not specify any voluntary mitigation under the heading "Freight Rail Safety," many voluntary mitigations would improve freight rail safety on the EJ&E rail line (such as VM 32). In these circumstances, SEA recommends only mitigation, Conditions 6 and 43, to further address freight rail safety.

### **4.2.2.3 Vehicle Safety**

#### *High Accident Frequencies*

Should the Proposed Action be approved and implemented, three highway/rail at-grade crossings would see an increase in predicted accidents that exceeds the threshold used by SEA in prior proceedings as a measure of high incidence of predicted accidents (more than one every seven years). The three highway/rail at-grade crossings are:

- Woodruff Road, Joliet, Illinois, milepost (MP) 0.82, Segment EJE-8, U.S. Department of Transportation (USDOT) #260597M
- Lake Street, Griffith, Indiana, MP 36.77, Segment EJE-4, USDOT #260661J
- Miller Street, Griffith, Indiana, MP 36.89, Segment EJE-4, USDOT #260662R

However, as discussed in more detail below, the Applicants agreed to mitigation at Woodruff Road as part of the negotiated agreement between the City of Joliet and the Applicants (Applicants and City of Joliet 2008). Therefore, SEA does not recommend additional mitigation for Woodruff Road.

Lake Street and Miller Street are adjacent to each other in Griffith, Indiana, and therefore improvements at one crossing could affect the second crossing. For that reason, SEA recommends mitigation specific to these two highway/rail at-grade crossings. The Town of Griffith commented that Lake Street and Miller Street do not have crossing gates (Town of Griffith 2008). SEA believes that the most effective mitigation for the Lake Street and Miller Street high accident frequency areas would be for the parties to reach an agreement that might include improving the warning devices at one street and closing the other.

To address this issue, the Applicants commit to a corridor study to evaluate safety at highway/rail at-grade crossings for the entire EJ&E rail line in VM 7. As a part of that study, SEA recommends that the Applicants specifically look at the corridor surrounding Lake and Miller Streets in Griffith. If the Applicants do not initiate a corridor study within 6 months from the effective date of the Board's final decision, SEA recommends in Condition 7 that the Applicants and local jurisdictional agencies initiate a diagnostic review at Lake and Miller Streets. SEA also recommends a contingency mitigation measure should the parties fail to come to an agreement concerning Lake Street and Miller Street (see Condition 8, below). SEA believes that this mitigation would be adequate.

#### *Vehicle Exposure*

Should the Proposed Action be approved and implemented, three highway/rail at-grade crossings would see a substantial increase in the number of highway vehicles that would be exposed to freight trains (a unitless number called exposure, or the number of trains per day multiplied by the number of vehicles per day). At two locations, exposure would exceed 1 million, which is a threshold identified by the Federal Highway Administration (FHWA) at which construction of a grade separation should be considered. A third highway/rail at-grade crossing would have a substantial increase in exposure to nearly 1 million. SEA found that exposure would exceed 1 million at the following locations:

- Ogden Avenue (US 34), Aurora, Illinois, MP 19.05, Segment EJE-10, USDOT #260560X
- Montgomery Road, Aurora, Illinois, MP 18.18, Segment EJE-10, USDOT #260562L

SEA found that exposure would approach 1 million at the following location:

- Lincoln Highway (US 30), Lynwood, Illinois, MP 30.69, Segment EJE-5, USDOT #260651D

From a vehicle delay standpoint, SEA also identified the highway/rail at-grade crossings at Ogden Avenue (US 34) in Aurora and Lincoln Highway (US 30) in Lynwood as crossings that likely would experience a substantial increase in vehicle delay as a result of the Proposed Action (see Section 4.2.3.1). Therefore, SEA is recommending a grade separation for these two highway/rail at-grade crossings because of concerns related to both vehicle delay and vehicle safety (see Condition 17, below).

The at-grade crossing at Montgomery Road is less than 1 mile south of the Ogden Avenue highway/rail at-grade crossing, so the recommended mitigation for Ogden Avenue would provide an alternate route for traffic using Montgomery Road. Thus, SEA believes there is no need for additional mitigation for Montgomery Road.

### *Industry Tracks*

During a stakeholder meeting on October 8, 2008, the Illinois Commerce Commission (ICC) raised a concern regarding highway/rail at-grade crossings at industry tracks adjacent to the EJ&E rail line (HDR 2008a). According to ICC, in some locations along the EJ&E rail line, the highway/rail at-grade crossing at the industry tracks adjacent to main tracks that cross the same roadway at-grade is protected with a different system of warning devices (that is, passive signs, flashers, or gates). ICC further noted that the selection of the warning devices for the industry track may have been based on the time of day that EJ&E proposed to provide service to the industries. ICC's concern is that if the Applicants change the typical time of service to those industries, the potential exists for vehicles to be trapped between these crossings and the queuing distance may be insufficient.

ICC cited as an example Gifford Road in Spaulding, Illinois. Gifford Road crosses an industry track at-grade; EJ&E currently uses the industry track between 12:00 a.m. and 6:00 a.m. to provide rail service to an asphalt plant. The highway/rail at-grade crossing of the industry track is approximately 200 feet south of a highway/rail at-grade crossing of the Metra Milwaukee District rail line. The signals at the two at-grade crossings are not interconnected. ICC is concerned that, should the Applicants change the hours of service to a time of day when more vehicular traffic is present and when there is more frequent service of Metra Milwaukee District commuter trains, greater potential exists for: 1) vehicle drivers to be confused by the warning devices not working in unison, and 2) queuing distances for vehicles waiting for the industry track signals to extend back onto the Metra rail line. ICC further stated that the time of day that EJ&E proposed to provide service was a significant factor in its decision to specify what warning devices were appropriate at the industry track crossing. In response to ICC's concern, SEA recommends Condition 9, below.

#### **4.2.2.4 *Passenger Rail Safety***

SEA concluded that there would be no substantial adverse effects on passenger rail safety attributable to the Proposed Action if its final recommended mitigation measures are implemented. The Applicants propose VM 37, assuring Amtrak's continued use of the St. Charles Air Line (Air Line) (including the approximately 19.9 miles of track from Markham Yard to the northern limits of the Applicants' rights) under current terms, and VM 38 and VM 41, regarding operation of key interlockings at West Chicago and Barrington, Illinois, and continued compliance with existing agreements and curfews affecting passenger or commuter train service. In addition, the Applicants propose VM 39, assuring continued discussion and cooperation with Metra on development of the proposed STAR Line, including possible use of the EJ&E rail line, and VM 40, assuring continued access to the pedestrian tunnel between the Metra Park-n-Ride lot and the Metra Matteson train station. In SEA's view, the voluntary mitigation would be adequate to address the potential passenger rail safety issues resulting from the Proposed Action.

#### **4.2.2.5 *Quiet Zones***

The Applicants have agreed to provide mitigation for quiet zones under VM 3, VM 4, and VM 5. In addition, SEA believes that mitigation would be warranted to retain the established quiet zone in Barrington should the Proposed Action be approved and implemented (see Condition 10 in Section 4.4).

#### **4.2.2.6 *Hazardous Materials Transportation Safety***

The Applicants proposed voluntary mitigation measures for hazardous materials transport (see VM 14 through VM 26 that include five of SEA's proposed mitigation measures from the Draft EIS. In addition to the voluntary mitigation proposed by the Applicants, SEA recommends conditions to supplement VM 21 and VM 25 presented in Conditions 11 and 12, below.

#### **4.2.2.7 Pedestrian and Bicycle Safety**

The Applicants propose VM 10 through VM 12, VM 43, and VM 44 to improve pedestrian safety near schools and parks near the EJ&E rail line. In addition, the Applicants propose VM 61 to maintain access to or provide detours for trails during Transaction-related construction. SEA recommends other conditions to supplement VM 10, VM 43, and VM 44 in Conditions 13 through 15, below.

USDOT expressed concern for West Chicago High School students who may attempt to cross the pedestrian at-grade crossing at George Street in West Chicago, Illinois, when trains would be slowed or stopped at the crossing (USDOT 2008). SEA shares USDOT's concern regarding stopped trains blocking pedestrian crossings, especially those frequently used by students traveling to and from school. SEA has observed, and EJ&E staff has confirmed, that northbound (railroad westbound) trains holding for the Union Pacific Railroad Company (UP) interlocking signals stop south of Ann Street, which is approximately 0.1 mile south of the pedestrian crossing and 0.3 mile south of the signal. EJ&E holds its trains at this location to avoid blocking the at-grade crossing of Ann Street (USDOT # 260545V, MP 28.50), the pedestrian crossing at George Street (USDOT # 260806T, MP 28.27), and the at-grade crossing of Church Street (USDOT # 260543G, MP 28.77). South of Ann Street, there are several miles of track without an at-grade crossing in which train(s) can wait with a clear line of sight to the signal. Upon obtaining a clear signal, the EJ&E trains advance, without stopping again. SEA has included a recommended condition that would require the Applicants to continue this practice (see Condition 16, below).

#### **4.2.3 Transportation Systems**

SEA analyzed the effect of the Proposed Action on the communities along the EJ&E rail line as well as on the communities along the CN subdivisions. The Proposed Action would increase train operations and associated negative effects in those communities along the EJ&E rail line, but would remove trains from the CN subdivisions, reducing delay and increasing safety at the highway/rail at-grade crossings along the CN subdivisions.

Several of the Applicants' voluntary mitigation measures would mitigate for the effects of the Proposed Action on regional and local highway systems (including highway/rail at-grade crossings) and emergency response (see VM 27 through VM 48) along the EJ&E rail line. In the following sections, SEA describes the mitigation needs for regional and local highway systems (Section 4.2.3.1), emergency response (Section 4.2.3.2), and airports (Section 4.2.3.3). SEA's final recommended conditions include both the Applicants' voluntary mitigation and tailored mitigation developed by SEA, as discussed below.

##### **4.2.3.1 Regional and Local Highway Systems**

###### *SEA's Criteria for Substantially Affected At-Grade Crossings*

From a transportation perspective, SEA used three thresholds to determine if highway/rail at-grade crossings would be substantially affected by the Proposed Action: 1) crossing level of service (LOS), 2) effects on queue length, and 3) total amount of delay for all vehicles delayed at a crossing in a 24-hour period.

SEA occasionally has used only crossing LOS in previous cases to determine substantially affected crossings. 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. There are many locations along the EJ&E rail line where roadways are important to regional mobility. As an example, Hough Street (IL 59) in Barrington, Illinois, is an important commuter route in the region. SEA

calculated the crossing LOS at this location to be LOS A for the No-Action and Proposed Action Alternatives. However, the Proposed Action queue length blocks a major thoroughfare (Northwest Highway) not blocked by the No Action queue length. This example reflects a location where crossing LOS doesn't identify potential regional mobility affects, thus other factors such as Proposed Action queue length affects are appropriate to use for mobility analysis in this transaction.

Solely using the crossing LOS criteria can be adequate in cases when at-grade crossings are less influenced by existing congestion. Contrary to the claims of some commenters on the Draft EIS, the existing congestion in communities along the EJ&E rail line warrants further consideration of the Proposed Action effects beyond crossing LOS. Roadways with existing high traffic volumes, as well as the proximity of existing signalized intersections, reflect the existing limited capacity of the roadway network in the region. This existing limited capacity presents mobility challenges to communities along the EJ&E rail line beyond those that would occur if there were less existing congestion. Thus, typical crossing LOS criteria applied to the Proposed Action effects would not adequately address mobility challenges in the region.

This is not the first case in which, in addition to crossing LOS to determine substantially affected crossings, SEA has also used queue length and total vehicle delay to better understand the effects of the Proposed Action on mobility (Board 1998 and 2002). As SEA explained in the Draft EIS, queue length and total vehicle delay are appropriate analyses when evaluating the effect of the Proposed Action on regional mobility. However, in the Chicago metropolitan area, simply exceeding the thresholds used by SEA does not mean that the crossing must be grade-separated or even requires mitigation, as some commenters have suggested. For example, SEA identified six locations along the CN subdivisions that currently experience more than 40 hours of total vehicle delay in a 24-hour period but are not planned by either the community or the region for grade separations. FHWA considers the 40 hours of total vehicle delay in a 24-hour period as just one factor to use in considering a grade separation. Just as the Proposed Action has multiple effects on a community, such as on transportation, safety, and socioeconomic impacts, SEA considered several factors when evaluating mitigation alternatives. These factors included existing rail operations, proposed changes to rail operations, existing and potential vehicular delays, existing mobility, existing physical attributes of the community (that is, roadway configuration, buildings, and mature trees) and safety.

#### *Substantially Affected Highway/Rail At-Grade Crossings*

In the Draft EIS, SEA identified 16 highway/rail at-grade crossings as "Substantially Affected" by the Proposed Action and considered 15 of those crossings for mitigation. SEA set forth mitigation options ranging from adopting the Applicants' voluntary mitigation, to modifying the roadway, to grade-separating the crossing, to modifying train operations, and invited the public to comment specifically on the options or try to enter into a negotiated agreement with the Applicants (see Section 6.3 of the Draft EIS).

SEA noted that some comments received on the Draft EIS at the public meetings indicated that the public had the impression that SEA would require that a grade-separated crossing be constructed at each of the 15 highway/rail at-grade crossings discussed above and that the Applicants would be required to pay all or a substantial amount of the cost. However, the Draft EIS only provided a range of mitigation options. Moreover, as SEA noted in the Draft EIS, any conclusions on mitigations here must reflect that many communities already experience traffic congestion that is not caused solely by the EJ&E rail line. Rather, multiple freight lines, commuter trains, and insufficient roadway capacity all contribute to existing congestion. Many comments on the Draft EIS confirmed that traffic congestion currently is a substantial problem in many communities along the EJ&E rail line. Accordingly, it would be inappropriate to hold the Applicants responsible for existing traffic problems and congestion.

As discussed in Section 2.5 of this Final EIS, SEA has re-evaluated the highway/rail at-grade crossings that would be substantially affected by the Proposed Action using new or updated data provided by the Applicants or by other agencies and determined that 13 crossings would be substantially affected, and that 8 of those crossings would warrant mitigation due to the effects under the Proposed Action (see Table 4.2-1). For a discussion of why SEA excluded the other substantially affected crossings from mitigation, see Chapter 2, Revised Information, Section 2.5. SEA appropriately tailored site-specific mitigation for some of the affected at-grade crossings based on geometry of the current crossing, proximity to other at-grade or grade-separated crossings, other data collected during site visits, community needs, and public and agency comments. SEA considered the substantially affected crossings from a holistic perspective, with numerous mobility factors, existing conditions, and the lack of available alternate routes. Finally, SEA explained why it did not recommend mitigation for three of the affected highway/rail at-grade crossings.

### *Mitigation Approaches For the Substantially Affected At-Grade Crossings*

As described above, SEA used three thresholds to determine if highway/rail at-grade crossings would be substantially affected by the Proposed Action: 1) crossing LOS, 2) effects on queue length, and 3) total amount of delay for all vehicles delayed at a crossing in a 24-hour period. This section describes the mitigation approaches for effects due to crossing LOS, vehicle queue length and total vehicle delay.

Woodruff Road and Washington Street in Joliet, Illinois are the only two highway/rail at-grade crossings that would be substantially affected under crossing LOS criteria. As discussed further below, the Applicants address these two roadways in the negotiated agreement with the City of Joliet (Applicants and City of Joliet 2008) (see Table 4.2-1, below) If the negotiated agreement were not in place, SEA would have evaluated and recommended mitigation for these two crossings, given the level of potential impacts of the Proposed Action. However, because the parties have been able to come to terms on tailored mitigation for Joliet designed to address local concerns, SEA recommends only that the Board impose mitigation requiring the Applicants to comply with the terms of their negotiated agreement.

The effect of the Proposed Action on queue length would be a result of the queue length of waiting vehicles at the highway/rail at-grade crossing blocking a major thoroughfare that would not be blocked under the No Action alternative. Mitigation to reduce the effects of increased train traffic on nearby queue length generally may be accomplished by the following:

- Traffic Advisory Signs
- Roadway Modifications
- Grade Separations

Traffic advisory signs placed in proximity to a signalized roadway intersection blocked by a vehicle queue resulting from increased train traffic advise drivers to stay clear of the intersection, thereby eliminating blocking other movements within the intersection. Traffic advisory signs would be cost-effective, unobtrusive, and provide a legal foundation for enforcement against the blockage of an intersection by vehicle queues.

Roadway modifications such as widening a roadway also would allow the storage of more vehicles on a road when a train passes. For example, widening a single-lane roadway to a two-lane roadway creates twice the storage capacity, cutting queue length in half and potentially eliminating vehicle queues into a major thoroughfare elsewhere. However, widening a roadway can be constrained by existing geometrics, and widening potentially creates a bottleneck where two lanes merge. Roadway widening also would have to be consistent with local and regional planning for the roadway network. Finally, the roadway widening impacts may be greater to a community than the effects of increased

train traffic, due to existing conditions (such as structures or mature trees that would need to be removed to allow for the widening of the roadway).

Grade separating a highway/rail at-grade crossing would eliminate any effect on vehicle queue lengths as a result of increased train traffic; however, it would not eliminate any queuing from signalized intersections within a community. In some locations, the proximity of signalized intersections to a highway/rail at-grade crossing may be the cause of existing congestion that a grade separation would not address. The construction of a grade separation also could potentially modify community character. Existing structures, mature trees, and local roadways near the highway/rail at-grade intersection might need to be removed to construct a grade separation. Grade separations are extremely costly (ranging from approximately \$20 million to \$50 million). Finally, because grade separations typically benefit primarily the community and not the railroad, railroads typically pay a small share (5 to 10 percent) of the total cost.

Total vehicle delay is a measure of the delay that all vehicles experience at a particular crossing in 24 hours. If a highway/rail at-grade crossing experiences more than 2,400 minutes (40 hours) of vehicle delay in a 24-hour period, SEA considered it to be substantially affected. Traffic advisory signs and roadway modifications would not be appropriate to mitigate total vehicle delay. Traffic advisory signs influence driver behavior, but not total vehicle delay because vehicles still would be delayed by passing trains. Roadway modifications such as widening allow for more storage of vehicles, but all of the vehicles still would be delayed by a passing train. On the other hand, grade separating a highway/rail at-grade crossing eliminates total vehicle delay by removing the conflict between the roadway and the rail line.

Grade separating a highway/rail at-grade crossing also removes safety-related exposure concerns. Exposure is a measurement of the number of highway vehicles that are exposed to freight trains. The FHWA considers an exposure of 1 million or more to warrant consideration of a grade separation. Grade separations eliminate any vehicle exposure to freight trains at a highway/rail at-grade crossing by removing the conflict between the roadway and the rail line.

SEA considered the individual characteristics of each highway/rail at-grade crossing site, in determining what if any mitigation would be appropriate for the substantially affected at-grade crossing at issue here. As part of its analysis, SEA considered existing congestion, existing structures (such as, mature trees, and local roadways) near the highway/rail at-grade intersection, and the cost of a grade separation when determining the type of mitigation recommended for each substantially affected highway/rail at-grade crossing. As discussed below, SEA recommends that the Board require two grade separations (one in Aurora, Illinois, and one in Lynwood, Illinois). SEA also recommends a condition requiring traffic advisory signs for four at-grade crossings, and two at-grade crossings at Joliet, Illinois, would be mitigated under the terms of the negotiated agreement Joliet executed with the Applicants. In SEA's view, it would be inappropriate to impose mitigation requiring roadway modifications (including closures in this case). But this is something the communities could consider and negotiate with the Applicants should the Proposed Action be approved and implemented.

#### *Recommended Mitigation for Substantially Affected At-Grade Crossings*

SEA identified two highway/rail at-grade crossings that should be grade-separated. These crossings are Ogden Avenue (US 34) in Aurora, Illinois, and Lincoln Highway (US 30) in Lynwood, Illinois. These two crossings have a predicted high exposure level (see Section 4.2.2.3) and exceed 40 hours of total vehicle delay in a 24-hour period. Both roadways have a projected traffic volume in 2015 of approximately 30,000 vehicles per day or more and are designated by their Illinois Department of Transportation (IDOT) as Strategic Regional Arterials, reflecting the importance to their respective communities and to the entire region. SEA believes that the Applicants should work with state and

local officials to implement grade-separation improvements. Since Ogden Avenue (US 34) and Lincoln Highway (US 30) are state routes, it is appropriate for IDOT to be the lead agency for planning and programming these two grade separations.

The other substantially affected highway/rail at-grade crossings are not recommended for grade separations, but SEA recommends mitigation with traffic advisory signs or mitigation under the Applicants' negotiated agreement. Generally, these roadways have alternate routes, meet only one of the thresholds, or experience delays in mobility due to existing conditions. Table 4.2-1 and the discussion following the table summarize SEA's recommended mitigation for each of these affected at-grade crossings.

<b>Table 4.2-1. Highway/Rail At-Grade Crossings In The Study Area That Require Mitigation Due To Effects Under The Proposed Action</b>					
<b>At-Grade Crossing Location</b>	<b>Milepost</b>	<b>Segment<sup>a</sup></b>	<b>USDOT Identification Number</b>	<b>Criteria for Inclusion<sup>b</sup></b>	<b>Recommended Mitigation</b>
<b>Western Subdivision</b>					
Old McHenry Road, Hawthorn Woods, Illinois	55.45	Segment EJE-14C	USDOT# 260503J	> 40 hrs delay/day; Queue blocks major thoroughfares	Traffic advisory signs
Main Street, Lake Zurich, Illinois	53.44	Segment EJE-14C	USDOT# 260507L	Queue blocks major thoroughfares	Traffic advisory signs
Hough Street (Illinois Route 59), Barrington, Illinois	49.80	Segment EJE-14C	USDOT# 260515D	Queue blocks major thoroughfares	Traffic advisory signs
Ogden Avenue (US 34), Aurora, Illinois	19.05	Segment EJE-10A	USDOT# 260560X	Exposure; >40 hrs delay/day	Grade separation
Plainfield-Naperville Road, Plainfield, Illinois	9.62	Segment EJE-9B	USDOT# 260580J	Queue blocks major thoroughfares	Traffic advisory signs
Woodruff Road, Joliet, Illinois	0.82	Segment EJE-8A	USDOT# 260597M	High incidence of predicted accidents; > 40 hrs delay/day; At-grade crossing Level of Service (LOS) reduction	Mitigation under Applicants-City of Joliet Memorandum of Agreement
<b>Eastern Subdivision</b>					
Washington Street, Joliet, Illinois	0.95	Segment EJE-7A	USDOT# 260601A	> 40 hrs delay/day; At-grade crossing Level of Service (LOS) reduction	Mitigation under Applicants-City of Joliet Memorandum of Agreement
Lincoln Highway (US 30), Lynwood, Illinois	30.69	Segment EJE-5A	USDOT# 260651D	Exposure <sup>c</sup> ; > 40 hrs delay/day; Queue blocks major thoroughfares	Grade separation

## Notes:

<sup>a</sup> See Figure 3.1-1 in Chapter 3 of the Draft EIS for locations of the EJ&E and CN rail segments.

<sup>b</sup> >40 hrs delay/day = There would be excess total vehicle delay (more than 40 hours/day);  
Queue blocks major thoroughfares = The 2015 queue blocks the crossing of major thoroughfares;

At-grade crossing Level of Service (LOS) reduction = A reduction in LOS from LOS D or better to worse than LOS D;

Exposure = Exposure would exceed the threshold of 1 million;

High incidence of predicted accidents = The increase in predicted accidents exceeds the threshold.

- <sup>c</sup> Exposure at Lincoln Highway (US 30) would be 999,905 under the Proposed Action, which approaches the 1 million threshold.

### *Old McHenry Road, Hawthorn Woods, Illinois*

Old McHenry Road would be a substantially affected highway/rail at-grade crossing under the Proposed Action because the queue length of approximately 1,186 feet could potentially block Midlothian Road and the total vehicle delay for a 24-hour period would be 2,540.3 minutes, more than SEA's 2,400-minute (40-hour) threshold (see Figure 4.2-1, below).

SEA recognizes that Old McHenry Road would meet criteria for both queue length and total vehicle delay as a result of the Proposed Action. SEA considered mitigating this at-grade crossing with traffic advisory signs or a grade-separated crossing. SEA determined that traffic advisory signs placed at key locations near the vicinity of the Old McHenry Road and Midlothian Road intersection could alleviate the potential for a blocking during a queue. Traffic advisory signs would be a cost effective measure to potentially minimize Proposed Action queue lengths from blocking a major thoroughfare such as Midlothian Road.

Therefore, to address the queue length affecting Midlothian Road, SEA recommends traffic advisory signs to alert drivers not to block the roadway intersection while a train passes on the EJ&E rail line. Traffic advisory signs placed at key locations near the vicinity of the Old McHenry Road and Midlothian Road intersection should alleviate the potential for a blocking during a queue. SEA's condition provides that the Applicants would coordinate with local and Illinois transportation agencies to place traffic advisory signs to minimize the potential for motorists to block the roadway intersection at Midlothian Road (see Condition 18, below).

SEA decided that it would be inappropriate to require mitigating this at-grade crossing with a grade-separated crossing, for the following reasons:

- SEA would not require a grade-separated crossing to mitigate for total vehicle delay<sup>2</sup> only as discussed above. As SEA noted in the analysis, above, the Chicago metropolitan area has not consistently used the threshold of total vehicle delay greater than 2,400 minutes (40 hours) in a 24-hour period, as the determining threshold when making decisions to invest in a grade-separated crossing
- The exposure risk does not meet established threshold criteria at this location
- The effects of queue length could be adequately mitigated with traffic advisory signs

SEA does not recommend a grade-separated crossing at Old McHenry Road.

### *Main Street, Lake Zurich, Illinois*

SEA identified the highway/rail at-grade crossing on Main Street as substantially affected under the Proposed Action because its queue length of 577 feet could potentially block traffic on IL 22. The Main Street at-grade crossing is approximately 350 feet from IL 22 (see Figure 4.2-1).

---

<sup>2</sup> Total vehicle delay in a 24-hour period is a measure of the amount of vehicular traffic present (that is, average daily traffic [ADT]), the amount of delay at the highway/rail at-grade crossing, and the effect of the train blocking the at-grade crossing.

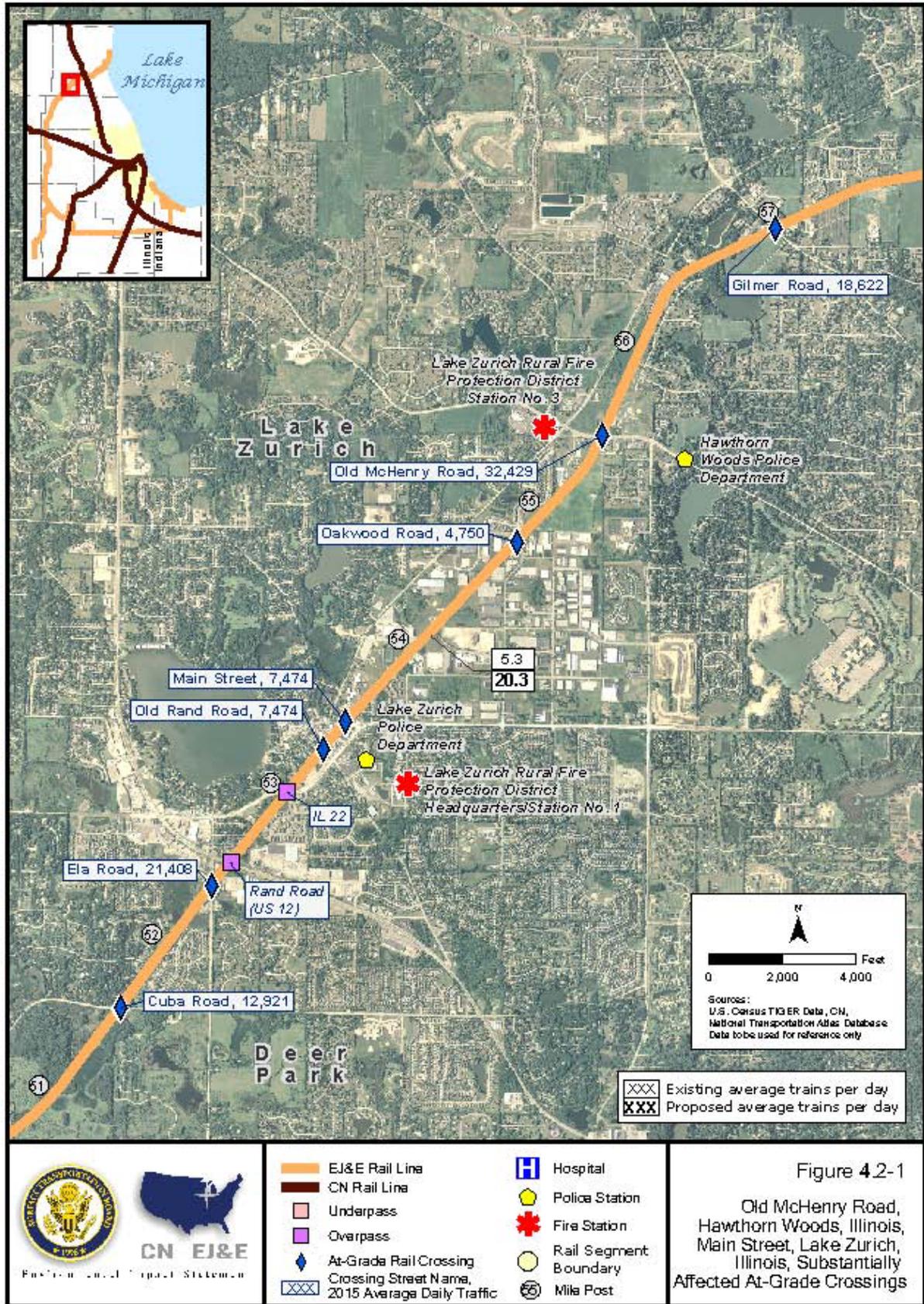


Figure 4.2-1  
Old McHenry Road, Hawthorn Woods, Illinois, Main Street, Lake Zurich, Illinois, Substantially Affected At-Grade Crossings

SEA does not recommend a grade separation at this location for the following reasons:

- A grade separation exists on IL 22 less than 0.5 mile away, providing an alternate route for Main Street
- Existing roadway geometry would complicate the construction of a grade separation at this location
- Effects from constructing a grade separation would be substantial at this location
- The effect of the Proposed Action on queue length does not justify a grade separation

Traffic advisory signs would be adequate mitigation at this location, since the IL 22 grade separation southwest of the Main Street highway/rail at-grade crossing provides motorists an alternate route. Instead of crossing the rail at Main Street, southwest-bound traffic could remain on IL 22, travel under the EJ&E rail line at the grade separation, and connect to West Main Street, approximately 0.5 mile away. SEA recommends that the Applicants coordinate with local and Illinois transportation agencies to place traffic advisory signs to keep motorists from blocking the roadway intersection of Main Street and IL 22 (see Condition 18, below).

#### *Hough Street (IL 59), Barrington, Illinois*

SEA identified the highway/rail at-grade crossing at Hough Street (IL 59) as substantially affected under the Proposed Action because the queue length of approximately 1,500 feet would block Northwest Highway (Figure 4.2-2).

SEA received several comments on the Draft EIS that traffic congestion in this area is excessive and that motorists are frustrated by the delay caused by existing congestion. Contributing factors include limited roadway capacity, high traffic volumes, multiple nearby traffic signals, and the nearby location of the UP/Metra rail line that also crosses through Street at-grade. As noted by the Chicago Metropolitan Agency for Planning (CMAP), IL 59 is a Strategic Regional Arterial (CMAP 2008). Although this designation reinforces the importance of IL 59 to the region's mobility, existing physical conditions and traffic congestion limit traffic flow along this roadway. SEA's analysis in Section 2.5.4 and 2.5.9 shows that the addition of trains on the EJ&E rail line, while increasing the delay, would not substantially modify the basic nature of the traffic congestion that motorists are currently experiencing. The Board's practice is to not impose mitigation for existing conditions, but only for Proposed Action-related effects.

SEA recognizes that many commenters consider a grade-separated crossing in Barrington, either at IL 59 or at Northwest Highway (US 14), or placing the EJ&E rail line in a trench through Barrington, as necessary and appropriate mitigation in this case. SEA believes that a grade separation at IL 59 would not be warranted because of existing vehicle delay conditions and the fact that a grade separation would severely affect the character of the community by removing trees and/or buildings as well as potentially affecting access to local businesses

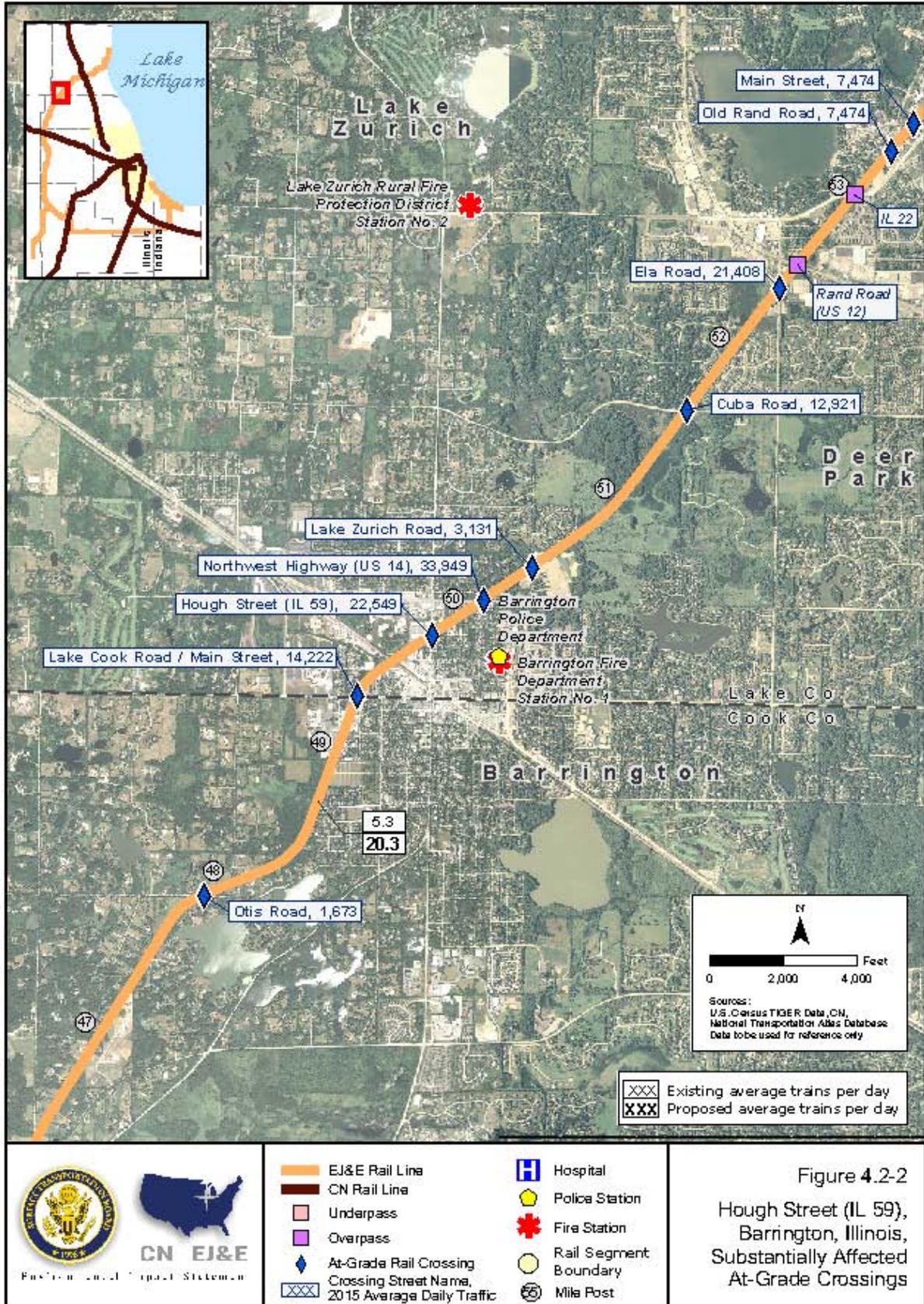


Figure 4.2-2  
Hough Street (IL 59),  
Barrington, Illinois,  
Substantially Affected  
At-Grade Crossings

SEA evaluated a grade separation at US 14 to alleviate traffic delay in the vicinity of the IL 59 at-grade crossing by providing alternate access across the railroad via the grade separation. As a part of its analysis, SEA created a traffic model of downtown Barrington to evaluate mitigation options due to the complex congestion in the community (see Appendix A in this Final EIS). The traffic model shows that a grade separation at US 14 would have minimal benefit to traffic flow in the Barrington area. Even if a grade separation were constructed, existing traffic signals in proximity to one another, as well as the UP/Metra rail line, would result in substantial queuing along IL 59 and US 14. As mentioned above, motorists are frustrated by the traffic congestion that now exists in the vicinity of the crossing. However, SEA believes it is not the responsibility of the Applicants to mitigate for existing traffic congestion in the community by grade separating US 14, nor would that mitigation option provide a successful solution to congestion in the Barrington area.

SEA has also evaluated the concept of placing the EJ&E rail line in a trench through Barrington. SEA determined that placing the rail line in a trench would be neither reasonable nor practical. While the trench would remove any effects of the EJ&E rail line on at-grade crossings, construction effects of the trench would physically disrupt the character of the community. In addition, the costs of constructing such a trench for the EJ&E rail line would be prohibitive. SEA notes that under VM 38 and VM 41, the Applicants have agreed to provide priority to commuter rail operations, which would limit freight train operations across IL 59 during the morning and evening peak traffic periods.

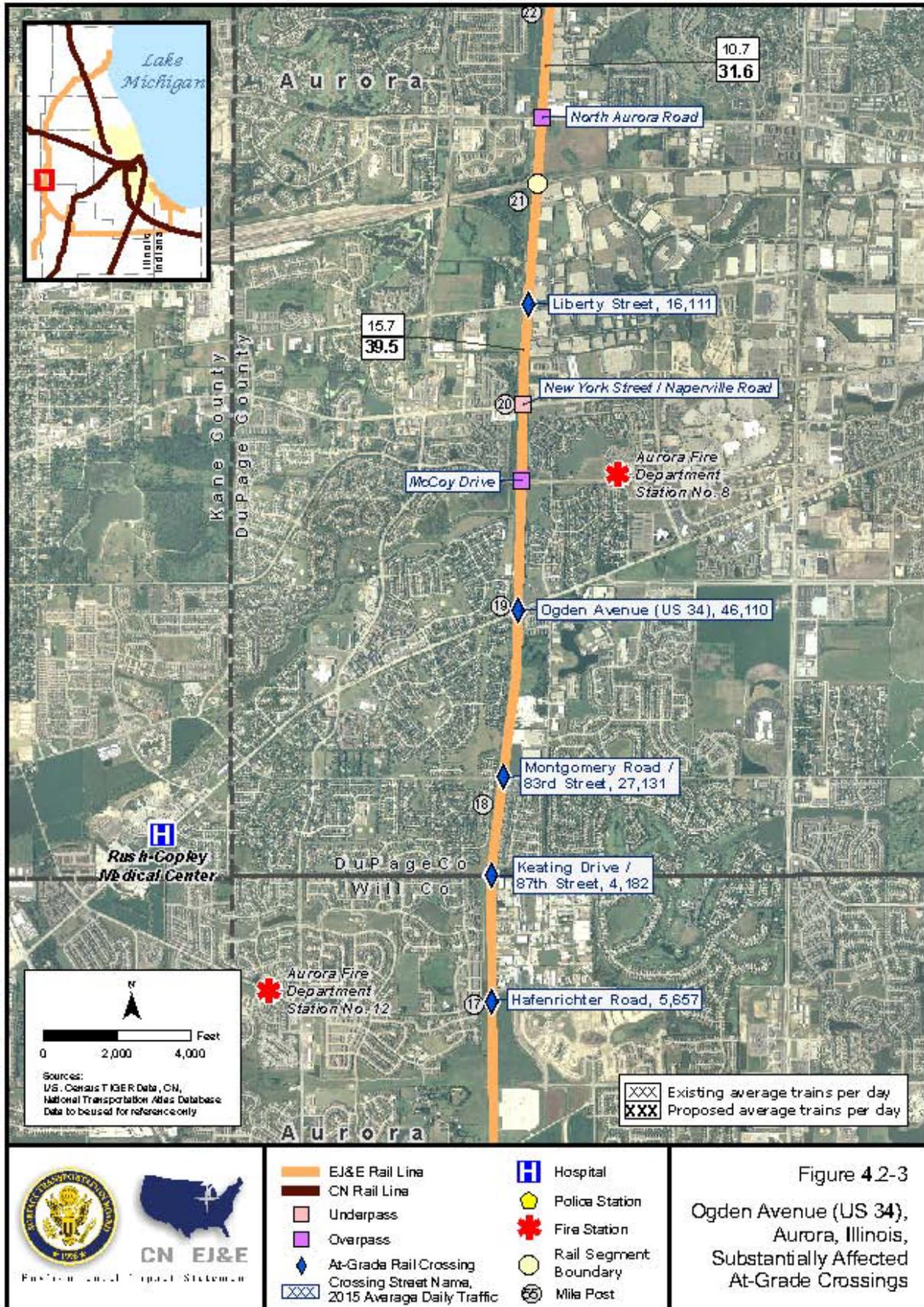
Based on all of its analysis, SEA is satisfied that to address the effect on queue length at the intersection of IL 59 and US 14, traffic advisory signs would be useful because the signs would alert drivers not to block the roadway intersection during a train pass. Traffic advisory signs placed at key locations near the vicinity of the roadway intersection should alleviate the potential for intersection blocking due to the queuing at IL 59. SEA recommended mitigation would provide that the Applicants coordinate with local and Illinois transportation agencies to place traffic advisory signs at appropriate locations to keep motorists from blocking the roadway intersection of IL 59 and US 14 (see Condition 18, below). SEA recognizes that roadway modifications also could improve conditions in Barrington, but this is something that would have to be a negotiation between the community and the Applicants.

#### *Ogden Avenue (US 34), Aurora, Illinois*

SEA identified the highway/rail at-grade crossing at Ogden Avenue as substantially affected because the total delay, 4,377.0 minutes, substantially exceeds SEA's 2,400-minute (40-hour) threshold and the crossing has an exposure greater than 1 million (see Figure 4.2-3).

Ogden Avenue (US 34) presently carries a very high volume of traffic, reflecting its importance to mobility in the region. Indeed, as noted by CMAP, US 34 is a Strategic Regional Arterial (CMAP 2008). This designation confirms the importance of US 34 to the region's mobility. Moreover, alternate routes are not readily available in the vicinity of the highway/rail at-grade crossing. US 34 also meets the total vehicle delay and exposure criteria used in SEA's analysis of the Proposed Action. Because of these transportation and safety factors, as well as high vehicle volume on the roadway, the excessive amount of delay, the importance of the roadway, and the lack of viable alternate routes, SEA has concluded that grade separation would be warranted and appropriate mitigation for this roadway.

Constructing a grade separation at US 34 would eliminate the increase in vehicle delay and vehicle exposure as a result of the Proposed Action. However, the vehicle delay effect at US 34 would only partly be the result of the Proposed Action. Therefore, SEA believes that it is appropriate for the cost of the grade separation to be shared by the public sector and the Applicants under the formula as discussed, below. SEA's recommended mitigation would require the Applicants to consult with local and Illinois transportation agencies to plan and construct a grade-separated crossing at US 34. SEA



anticipates that IDOT would be the lead agency for the development of these grade separations (see Condition 17, below).

*Plainfield-Naperville Road, Plainfield, Illinois*

SEA identified the highway/rail at-grade crossing at Plainfield-Naperville Road as substantially affected under the Proposed Action because the queue length of 440 feet would block IL 59. The intersection of IL 59 and Plainfield-Naperville Road is located 380 feet southwest of the highway/rail at-grade crossing (see Figure 4.2-4, below).

An alternate route is available to northbound motorists on IL 59 and 135th Street. A grade-separated crossing at IL 59 is approximately 500 feet from the intersection of IL 59 and Plainfield-Naperville Road. Placing traffic advisory signs at the intersection of IL 59 and Plainfield-Naperville Road, as well as the availability of the alternate route on IL 59 and 135th Street, would potentially keep motorists from blocking the intersection of Plainfield-Naperville Road and IL 59. Therefore, SEA recommends mitigation requiring that the Applicants coordinate with local and Illinois transportation agencies to place traffic advisory signs in appropriate locations to keep motorists from blocking the roadway intersection of Plainfield-Naperville Road and IL 59 (see Condition 18, below).

*Woodruff Road and Washington Street, Joliet, Illinois*

SEA identified the highway/rail at-grade crossing at Woodruff Road as substantially affected because the total delay of 9,381 minutes substantially exceeds SEA's 2,400-minute threshold, the crossing LOS reduces from LOS B to LOS F, and there is a high number of predicted accidents (see Figure 4.2-5, below).

SEA identified the highway/rail at-grade crossing at Washington Street as substantially affected because the total delay of 9,879 minutes substantially exceeds SEA's 2,400-minute threshold and the crossing LOS reduces from LOS B to LOS F (see Figure 4.2-5, below).

The Applicants agreed to mitigation for Woodruff Road and Washington Street under a negotiated agreement with the City of Joliet (Applicants and City of Joliet 2008). SEA recommends that, should the Board approve the transaction, the Applicants be required to comply with the terms of the negotiated agreement.

If the Applicants' negotiated agreement with the City of Joliet were not in place, SEA would have evaluated and recommended mitigation for both Woodruff Road and Washington Street, which could have included grade separations, given the level of potential effects of the Proposed Action. Grade separations at those locations could have eliminated the increase in vehicle delay, the reduction in crossing LOS, and for Woodruff Road, lowered the number of predicted accidents.

However, the Applicants and the City of Joliet have negotiated a mutually acceptable agreement that includes tailored mitigation that Applicants will provide for the City of Joliet. The negotiated agreement is more far-reaching in certain respects than mitigation that the Board might otherwise have imposed. Because Joliet and the Applicants have been able to come to terms that both the Applicants and the City of Joliet find satisfactory to address potential local concerns, SEA does not recommend mitigation for either Woodruff Road or Washington Street beyond requiring compliance with the parties' own agreement (see VM 27 in Section 4.3.3).

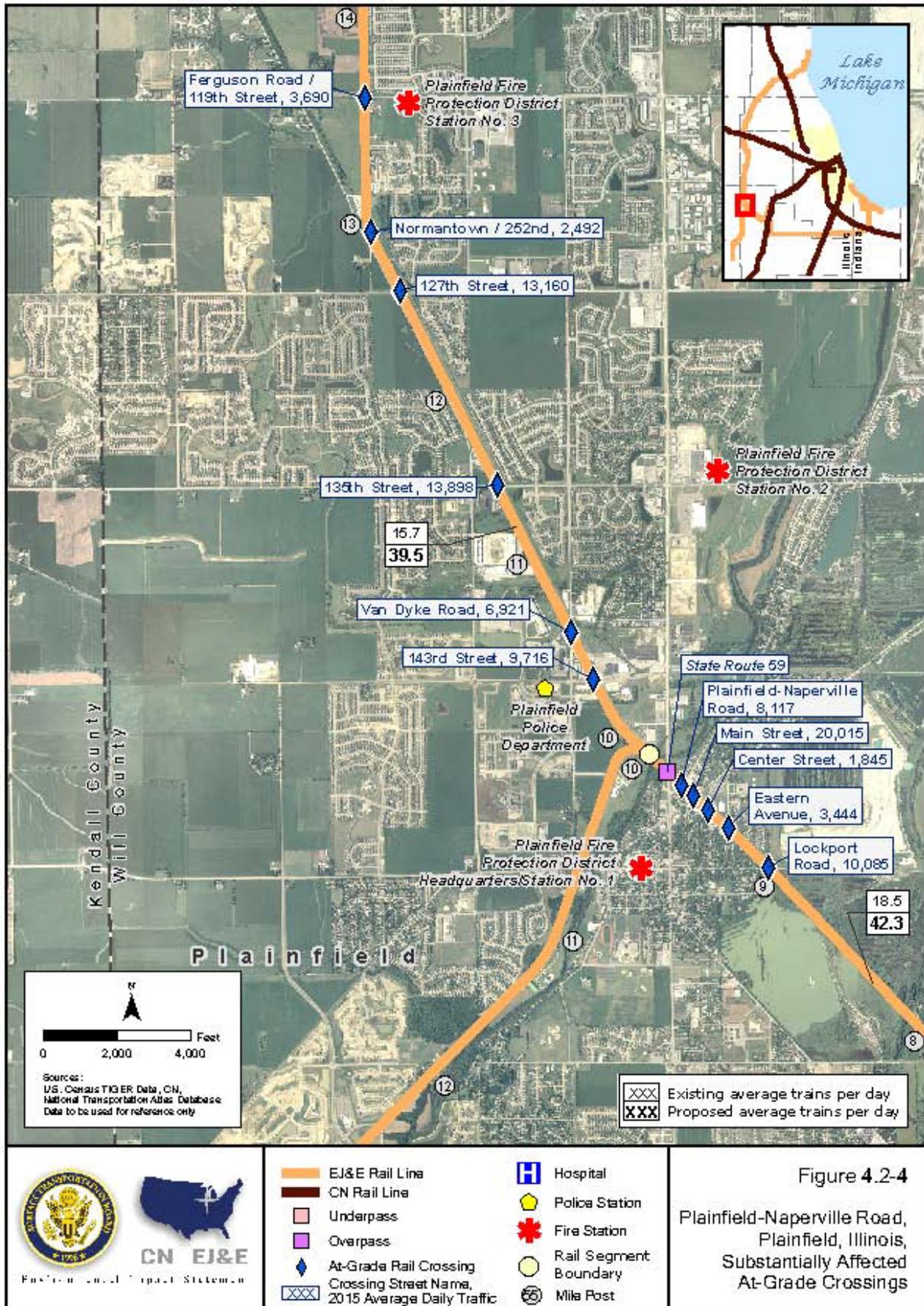


Figure 4.2-4  
Plainfield-Naperville Road,  
Plainfield, Illinois,  
Substantially Affected  
At-Grade Crossings

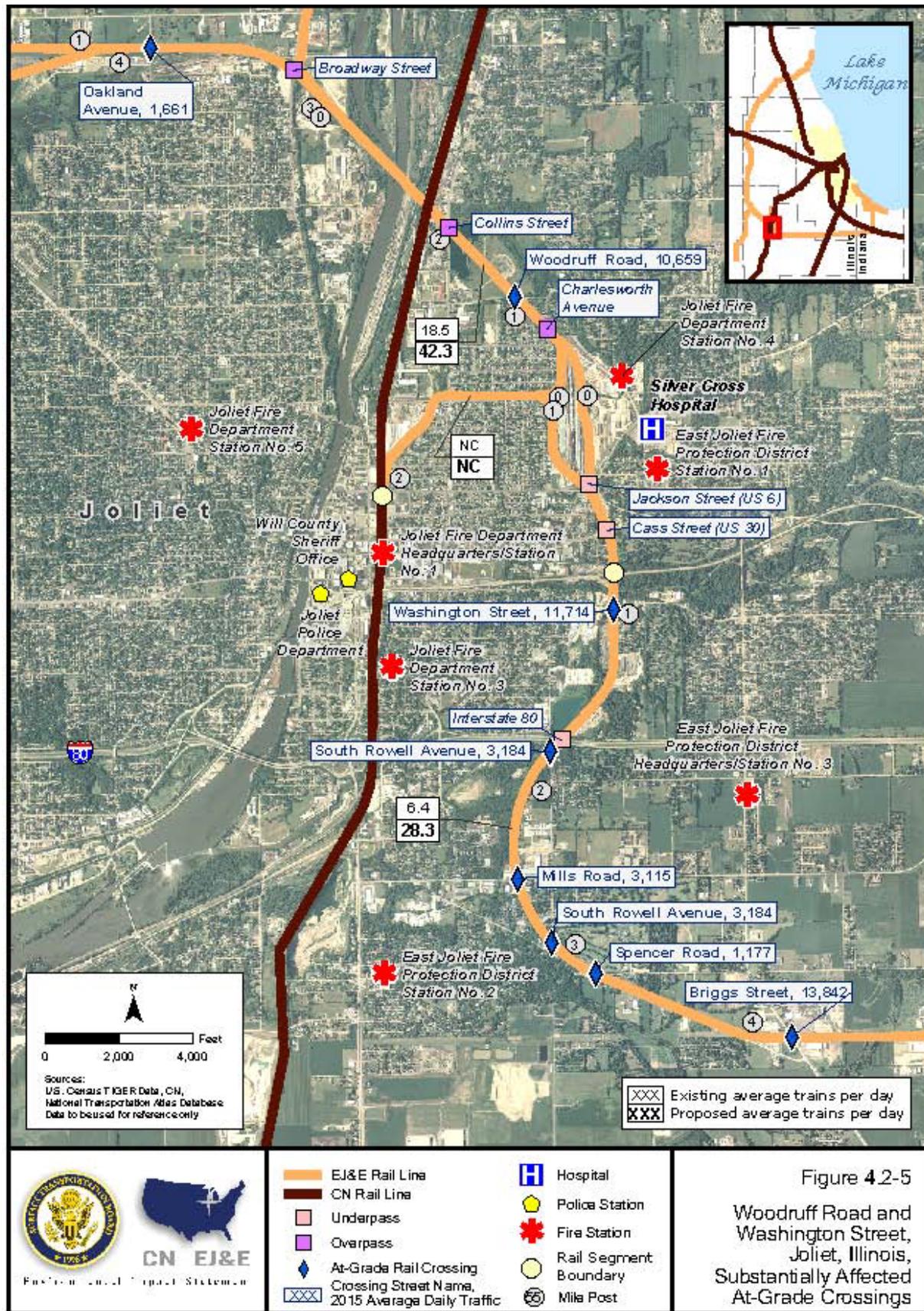


Figure 4.2-5  
 Woodruff Road and  
 Washington Street,  
 Joliet, Illinois,  
 Substantially Affected  
 At-Grade Crossings

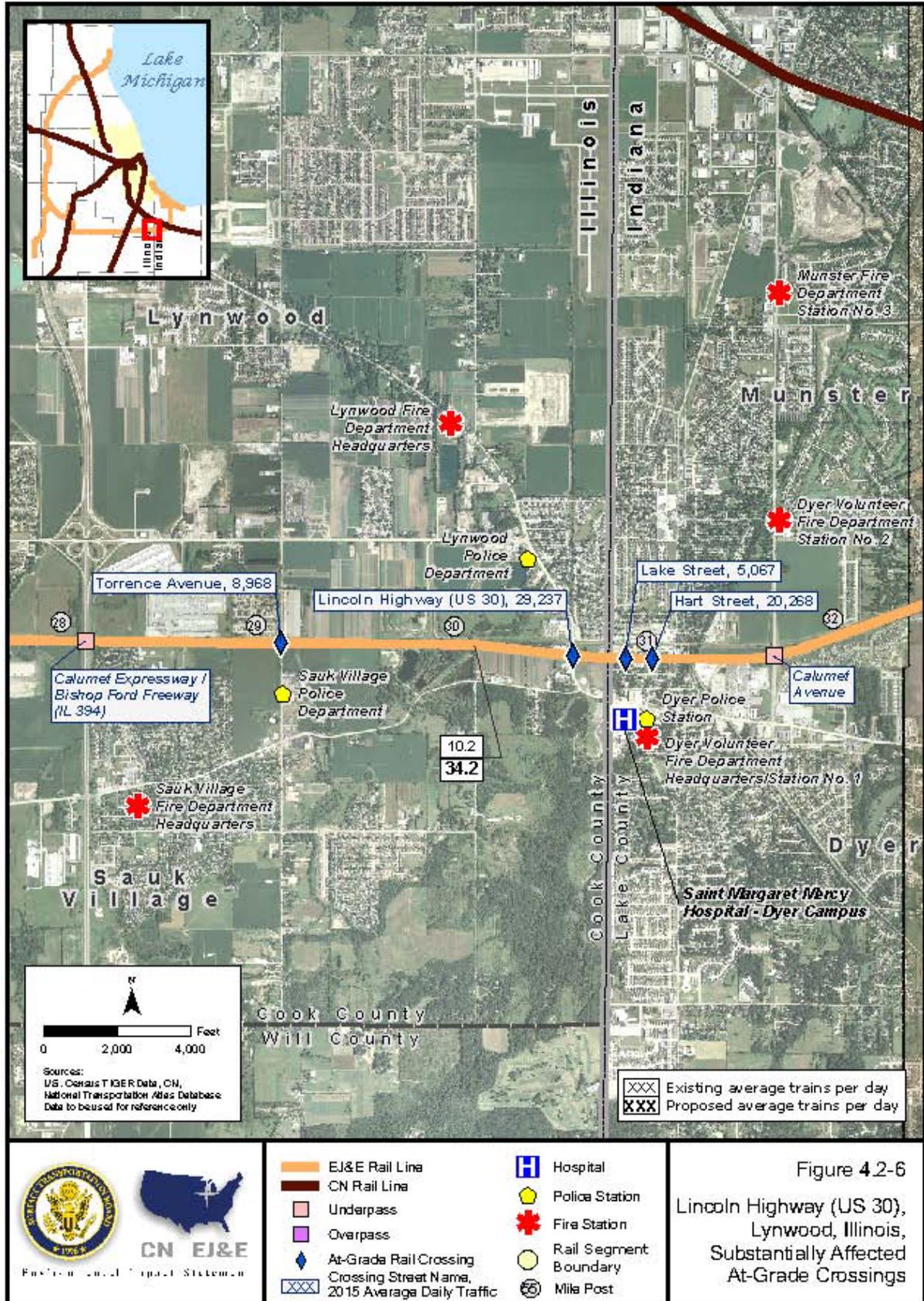


Figure 4.2-6  
Lincoln Highway (US 30),  
Lynwood, Illinois,  
Substantially Affected  
At-Grade Crossings

### *Lincoln Highway (US 30), Lynwood, Illinois*

SEA identified the highway/rail at-grade crossing at Lincoln Highway (US 30) as substantially affected by the Proposed Action because the queue length would block Sauk Trail (a major thoroughfare), the total vehicle delay of 3,034.5 minutes would substantially exceed SEA's 2,400-minute (40-hour) threshold, and the exposure would be nearly 1 million. The intersection of US 30 and Sauk Trail is located 850 feet south of the highway/rail at-grade crossing. The queue length under the Proposed Action would be approximately 940 feet (see Figure 4.2-6, above).

US 30 carries a very high volume of traffic, reflecting its importance to mobility in the region. As noted by CMAP, US 30 is a Strategic Regional Arterial (CMAP 2008). This designation confirms the importance of US 30 to the region's mobility. US 30 is an important roadway for Illinois and Indiana because it is a significant conduit between communities in both states. Alternate grade-separated routes are not readily available in the vicinity of the highway/rail at-grade crossing. Because of these transportation and safety factors, as well as a high volume of vehicles on the roadway, the increased delay that would result from the Proposed Action, the possibility for the traffic queue at the EJ&E at-grade crossing to block an important regional roadway, and the lack of alternate routes, SEA concludes that a grade separation would be an appropriate mitigation for this roadway.

Grade-separating US 30 at the highway/rail at-grade crossing would eliminate the total vehicle delay, vehicle queuing, and vehicle exposure. Total vehicle delay and exposure reflect too many vehicles stopped while a train passes through the crossing. The grade separation would eliminate this problem by separating vehicular traffic from train traffic. The fact that a grade separation is recommended at this location does not mean that the Applicants should bear the entire cost. SEA's analysis shows that the vehicle delay effect at US 30 would be only partly the result of the Proposed Action. Therefore, SEA believes that it is appropriate for the cost of the grade separation to be shared by the public sector and the Applicants under the formula discussed below. But SEA's final recommendation would require the Applicants to consult with local and Illinois transportation agencies to plan and construct a grade-separated crossing at US 30. SEA anticipates that IDOT would be the lead agency for the development of these grade separations (see Condition 17, below).

### *Grade-Separated Crossing Funding*

SEA received many public comments requesting that the Board require the Applicants to fully fund numerous grade-separated crossings throughout the Study Area. SEA agrees that many communities along the EJ&E rail line would benefit from more grade separations. However, many of these communities already face traffic congestion on the roadways and at highway/rail at-grade crossings on the same roadways that would be potentially affected by the Proposed Action, as discussed in detail in Chapters 4 and 6 of the Draft EIS and Section 2.5 of this Final EIS. In addition, the primary cause of the existing traffic congestion in the communities along the EJ&E rail line is the high number of vehicles and lack of capacity on the current roadway system. Even where trains are responsible for it, traffic congestion would not be caused solely by the Applicants' trains on the EJ&E rail line but also by the presence of multiple freight railroads on the lines that pass through the communities outside the EJ&E arc, some of which also are used by commuter trains. It would be inappropriate to hold the Applicants responsible for the inadequate roadway system that exists in the communities along the EJ&E rail line and the rarity (and in some communities, the absence) of grade-separated crossings. Moreover, as a number of commenters have pointed out, railroads historically have not paid for more than a small share (5 to 10 percent) of the total cost of grade separations because grade separations primarily benefit the community and not the railroad.

SEA considers many of the traffic problems along the EJ&E rail line to be existing conditions, thus making it particularly inappropriate to require the Applicants to bear all or most of the cost. However, as explained above, the Proposed Action would, in the two cases where grade crossing

separations are recommended as mitigation, exacerbate the existing problems and cause substantial effects. As discussed above, SEA recommends grade-separated crossings for two substantially affected highway/rail at-grade crossings: one at Ogden Avenue (US 34) in Aurora, Illinois, and one at Lincoln Highway (US 30) in Lynwood, Illinois. As discussed above, SEA also identified both Woodruff Avenue and Washington Street in Joliet as substantially affected and would have evaluated and recommended mitigation for both Woodruff Road and Washington Street. Such mitigation could have included grade separations, given the level of potential effects of the Proposed Action. Grade separations at those locations could have eliminated the increase in vehicle delay, the reduction in crossing LOS, and for Woodruff Road, removed the high incidence in the number of predicted accidents.

However, Applicants and the City of Joliet have negotiated a mutually acceptable agreement, which is more far-reaching in certain respects than mitigation that the Board might otherwise have imposed. Because Joliet and Applicants have been able to come to terms that both Applicants and the City find satisfactory to address potential local concerns, SEA does not recommend mitigation for Woodruff Road or for Washington Street beyond requiring compliance with the parties' own agreement (see VM 27 in Section 4.3.3). A negotiated agreement is preferable to an imposed mitigation solution because the agreement can be implemented immediately, would be fully funded by the Applicants, and is tailored to specific community needs.

With respect to funding of the two grade separations SEA recommends for mitigation, vehicle congestion problems at Ogden Avenue (US 34) and Lincoln Highway (US 30) would be a combination of existing conditions and potential effects resulting from the Proposed Action. Therefore, SEA believes that the grade separation mitigation appropriately should be funded by a combination of entities and not by the Applicants alone.

Comments received in response to the Draft EIS from the Applicants (Applicants 2008a), Union Pacific (UP) (UP 2008), and the American Association of Railroads (AAR) (AAR 2008) indicate that if SEA finds grade separations appropriate for mitigation, precedent in grade separations using Federal funds requires the railroad to pay no more than 5 percent of the grade separation cost. The Applicants state that "... under the current funding scheme, a railroad's contribution to a grade separation is capped at 5 percent when federal dollars are used..." and that "...simply because a crossing has been identified as a candidate for a grade separation in an environmental review does not provide any basis for imposing a greater burden on the Transaction<sup>3</sup> than the law imposes on railroads generally when crossing delay call for separation" (Applicants 2008a). Similarly, UP states that "...where grade crossing elimination projects are involved, Federal Highway Administration regulations cap a railroad's share of costs at 5 percent" (UP 2008). On the other hand, a number of commenters have maintained that, notwithstanding existing traffic congestion, the Applicants should pay the entire cost of any grade separations that might be ordered by the Board.

SEA concludes that it would be appropriate to require the Applicants to bear somewhat more than the typical cost share of the two grade separations SEA recommends. In most situations involving a grade crossing separation, a public entity is pursuing a grade separation to address highway congestion or to improve highway infrastructure unrelated to rail operations. Because the railroad receives only limited benefit from a grade separation, its contribution is capped at a relatively low percentage of the cost. In the current case, SEA's analysis shows that a portion of the traffic delay would be created by the Proposed Action. In similar circumstances, the Board has in previous cases

---

<sup>3</sup> The Applicants use the term Transaction to refer to the Proposed Action.

required applicants to contribute more than the typical 5 percent share toward the cost of grade separation.<sup>4</sup>

At the same time, SEA rejects the argument of some commenters that the Applicants should be required to bear all or nearly all of the cost of the two grade separations SEA is recommending. While some mitigation measures should be the Applicants' sole responsibility, others, such as grade separations, by necessity must involve the participation, cooperation and approval of outside parties. In addition, grade separations typically are very expensive and provide a substantial benefit to communities with existing congestion. Because the grade separations involved here would mitigate both existing conditions and some of the effects of the Proposed Action, SEA believes that the Applicants should cover only a portion of these grade separation costs.

In preparing this Final EIS, an important issue was how to determine a reasonable and appropriate approach for the Applicants' cost participation for the two grade separations recommended as mitigation. As part of its consideration, SEA applied two different approaches to determine a reasonable and appropriate level of cost participation for the Applicants, based on all circumstances presented here. First, SEA applied a regional approach that considered all highway/rail at-grade crossings affected by the Proposed Action on both the EJ&E rail line and the CN rail line segments. Second, SEA considered only the potential impact of the Proposed Action on vehicle traffic delay at Ogden Avenue (US 34) and Lincoln Highway (US 30) (the site-specific approach).

In order to evaluate the net impact of the Proposed Action on regional transportation delay, SEA calculated the total vehicle delay at all of the affected highway/rail at-grade crossings on both the EJ&E rail line and the affected CN rail line segments. Specifically, SEA evaluated 88 highway/rail at-grade crossings on the EJ&E rail line and 134 highway/rail at-grade crossings on the CN rail line segments, a total of 222 crossings. As explained in detail elsewhere in the Final EIS, vehicle delay would generally increase at the highway/rail at-grade crossings along the EJ&E rail line and would generally decrease at the highway/rail at-grade crossings along the CN rail line segments. Overall, SEA calculated that the Proposed Action would cause a net increase in vehicle delay in the Chicago region of 356 hours per day out of a total of 2,259 hours per day for all of the highway/rail at-grade crossings examined. This means that the Proposed Action would be responsible for approximately 15 percent of the total future delay. SEA's estimate of a 15 percent impact on vehicle delay as a result of the Proposed Action represents a regional perspective that seeks to balance the reduction in vehicle delay because of reduced train traffic with the increase in vehicle delay due to additional train traffic. SEA believes that basing the share of the cost of these grade separations that the Applicants should bear on the results of this regional analysis would be reasonable and appropriate because this cost allocation reflects both the anticipated beneficial and detrimental effects of the Proposed Action. This traffic delay analysis is presented in full in Section 2.5 of this Final EIS.

In order to produce the most thorough analysis practical, SEA also conducted an evaluation of a cost-sharing approach based on the contribution of the Proposed Action on the specific delay at both the Ogden Avenue (US 34) and Lincoln Ave (US 30) at-grade crossings of the EJ&E rail line. As shown in the Draft EIS and updated in Appendix A of this Final EIS (see Table A.5-1), for each highway/rail at-grade crossing analyzed, SEA calculated the total delay for all delayed vehicles under both the No Action and Proposed Action alternatives. In the case of Ogden Avenue, SEA determined that the total delay per day under the No Action alternative would be 1,133 minutes. The total delay per day under the Proposed Action would be 4,377 minutes, which means that the Proposed Action could

---

<sup>4</sup> The Final EIS for the Conrail Acquisition, states on page 7-31, that "because of the significant impact of Acquisition-related actions on traffic delay, the Board believes that the CSX share of the costs for design and construction of the grade separation should be substantially more than the traditional railroad share for similar projects, which is 5% for Indiana" (Board 1998).

contribute 74 percent of the total delay at Ogden Avenue (US 34). Based only on this site-specific analysis the Applicants' contribution could be deemed to be as high as 74 percent of the cost of the US 34 grade separation.

For Lincoln Highway (US 30), SEA's site-specific analysis showed that the total delay under the No Action alternative would be 395 minutes, and that this would rise to 3,035 minutes under the Proposed Action, which means that the Proposed Action could add 87 percent to the vehicle delay.

However, the site-specific analysis summarized above does not factor in any of the Proposed Action's countervailing benefits that would arise from train traffic decreases on the CN lines. Moreover, SEA's site-specific analysis focuses solely on vehicle delay. As discussed in this Final EIS, SEA considered several other factors (level of service, change in risk profile, vehicle safety exposure, emergency response, and queue length) in evaluating the impacts of the Proposed Action on highway/rail at-grade crossings and whether, and what type of mitigation was warranted. Grade separations at Ogden Avenue and Lincoln Highway would address not only vehicle delay, but also both the substantial pre-existing traffic congestion and existing issues at each of those locations involving the level of service, risk profile, vehicle safety exposure, emergency response, and queue length backups. Because railroads are not responsible for the portion of a grade separation that would benefit the community by improving existing conditions, it would, in SEA's view, be reasonable to balance the benefit of reducing or eliminating these pre-existing issues against the increase in transaction-related traffic delay to reduce Applicants' contribution to these grade separations. In other words, SEA believes that, since it has not been the Board's practice to provide mitigation for pre-existing problems such issues should be accounted for in the Board's determination of Applicants' contribution of funds for the grade separations. Finally, grade separations are an expensive solution; SEA estimates that the Ogden Avenue (US 34) grade separation would cost \$40.4 million and the Lincoln Highway (US 30) grade separation would cost \$52.5 million.

For these reasons, SEA believes that the regional approach discussed above provides the most reasonable basis for assigning the Applicants' portion of the cost of the recommended grade separations in this case. Therefore, SEA's final recommendation is that the Board should make the Applicants responsible for 15 percent of the cost of these two grade separations, and impose a condition requiring the Applicants to abide by the terms of their negotiated agreement in lieu of other mitigation for the crossings in Joliet.

### *Revised Connections*

As discussed in Section 2.5.3, the Applicants revised some of their original proposed connections along the EJ&E rail line. The Applicants revised the double track connection at Leithton (near Mundelein, Illinois) and the connection at Matteson, Illinois (as described in the Applicants' letters dated September 17, 2008, and August 21, 2008, respectively (Applicant 2008e, Applicant 2008f). The Applicants proposed the revised connections in order to improve train operation speeds, therefore reducing Proposed Action-related delay at the highway/rail at-grade crossings on the EJ&E rail line and CN's Waukesha Subdivision. The modified connection at Leithton would allow for increased train speeds through the highway/rail at-grade crossings of Allanson Road, IL 60/83 and Diamond Lake Road, near Mundelein, while the modified connection at Matteson, Illinois, would allow increased train speeds through the highway/rail at-grade crossings of Cicero Avenue, Western Avenue, and Main Street. Because of these revisions, SEA is not proposing mitigation for these grade crossings that otherwise would have been affected. SEA is, however recommending that the Applicants be required to go forward with their revised connections at these two locations (see Condition 19).

### *Signalized Intersections*

As discussed in Section 2.5.9, ICC asked the Board to impose a condition related to signalized intersections. SEA is recommending a condition requiring consultation with the ICC and INDOT (see Condition 20, below).

#### **4.2.3.2      *Emergency Response***

The Applicants commit to minimizing emergency response vehicle delay under the Proposed Action and during construction in VM 42, VM 45, VM 47, and VM 48, below.

Based on public comments on the Draft EIS, SEA performed analysis for additional emergency service providers for the Final EIS and identified three additional emergency service providers that would be substantially affected by the Proposed Action but were not presented in the Draft EIS (see Chapter 2, above). In Table 4.2-2, SEA lists 13 emergency service providers that would be potentially substantially affected under the Proposed Action and for which SEA recommends mitigation.

As discussed above, the Applicants have negotiated an agreement with the City of Joliet; therefore, SEA is not recommending any mitigation for Joliet Fire Department – Station No. 8. For the remaining 12 of the 13 emergency service providers listed in Table 4.2-2, SEA proposes as mitigation requiring a real-time video monitoring system, Closed Circuit Television Surveillance System (CCTV), which would consist of a network of video cameras installed at selected locations along the EJ&E rail line. These video cameras would transmit a signal to a specific place where they would be directly linked to live video monitors at designated emergency response dispatch centers. CCTV differs from broadcast television in that the signal would not be openly transmitted, though it may employ point-to-point wireless links. The video cameras would be installed at locations that provide the emergency dispatcher information to reasonably predict train movements across selected highway/rail at-grade crossings (see Table 4.2-2). Under SEA's recommended mitigation, a minimum of two video cameras would be installed at each location facing opposite directions so that the viewer could see trains approaching in both directions, as well as trains stopped at at-grade crossings. Emergency response dispatchers could use this video feed to advise emergency vehicle operators to use alternate routes in the event that a grade crossing would be blocked or inaccessible.

SEA expects that the Applicants would coordinate with the appropriate agencies to select appropriate equipment and install a CCTV system. SEA also recommends that the Board require the Applicants to fund the initial installation of the video cameras and all ancillary equipment, including the poles, cables, controllers, and cabinet to house the camera controller and other equipment. The communication equipment to relay the video image to the emergency response dispatch facilities could be through fiber optic cable or radio transceiver. The receiver of the video image could use any type of monitor to view the video image. The Applicants and appropriate agencies should configure the video cameras so the movement of the trains can reasonably be predicted at affected highway/rail at-grade crossings listed in Table 4.2-2. The Applicants would train two individuals from each affected emergency service provider to use the system, while ownership, maintenance and service for this system would be funded and performed by the governing bodies of the fire protection districts/departments and emergency response dispatch centers that receive it after the system is installed and operational (see Condition 21, below). The locations at which SEA proposes CCTV systems also should be able to access the dispatching monitors that the Applicants committed to providing in VM 42 in Section 4.3.

**Table 4.2-2. Emergency Service Providers That Require Mitigation Under the Proposed Action Due to Potential Effects**

<b>Community</b>	<b>Facility</b>	<b>Recommended Mitigation</b>
Mundelein, Illinois	Countryside Fire Protection District - Station No. 1	Real-time video monitoring (CCTV) at selected locations
Lake Zurich, Illinois	Lake Zurich Rural Fire Protection District - Station No. 3	Real-time video monitoring (CCTV) at selected locations
Barrington, Illinois	Barrington Fire Department - Station No. 1	Real-time video monitoring (CCTV) at selected locations
Barrington, Illinois	Advocate Good Shepherd Hospital	Real-time video monitoring (CCTV) at selected locations
Bartlett, Illinois	Bartlett Fire Protection District - Future Station No. 3	Real-time video monitoring (CCTV) at selected locations
West Chicago, Illinois	West Chicago Fire Protection District Headquarters/Station No. 1	Real-time video monitoring (CCTV) at selected locations
West Chicago, Illinois	West Chicago Fire Protection District - Station No. 3	Real-time video monitoring (CCTV) at selected locations
Plainfield, Illinois	Plainfield Fire Protection District - Station No. 3	Real-time video monitoring (CCTV) at selected locations
Joliet, Illinois	Joliet Fire Department - Station No. 8	Mitigation under the Applicants-City of Joliet negotiated agreement
Chicago Heights, Illinois	Saint James Hospital and Health Centers - Chicago Heights	Real-time video monitoring (CCTV) at selected locations
Schererville, Indiana	Schererville Fire Department Headquarters	Real-time video monitoring (CCTV) at selected locations
Griffith, Indiana	Griffith Volunteer Fire Department Headquarters/Station No. 1	Real-time video monitoring (CCTV) at selected locations
Griffith, Indiana	Griffith Volunteer Fire Dept. - Station No. 2	Real-time video monitoring (CCTV) at selected locations

#### **4.2.3.3 Airports**

In response to concerns raised regarding the Gary/Chicago International Airport, SEA recommends a mitigation measure requiring the Applicants to adhere to the terms of the Preliminary Memorandum of Understanding (PMOU), announced on June 26, 2008, to prevent the Proposed Action from affecting the Gary/Chicago International Airport expansion plans (Gary/Chicago International Airport 2008) (see Condition 22, below). The PMOU provides a framework to address relocation of the EJ&E rail line, construction of a bridge over the existing Norfolk Southern Rail Road (NS) Gary Branch, and construction of a grade-separated crossing at Industrial Highway. SEA does not believe additional mitigation for Gary/Chicago International Airport is warranted.

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

SEA determined that the operations under Proposed Action would not affect hazardous waste sites (that is, sites that contain hazardous materials, including petroleum products that could potentially

harm human health or the environment). However, the Applicants may encounter undocumented hazardous waste during Proposed Action-related construction activities. Therefore, SEA recommends mitigation that would apply during construction in Conditions 44 and 45, below.

#### **4.2.5 Land Use**

SEA reanalyzed the effects of the Proposed Action on land use, zoning, public lands, and existing and potential development areas for this Final EIS. This additional assessment was in response to comments about land use either during the formal Draft EIS comment period or at SEA's public meetings. SEA also recalculated potential land use effects for the Revised Matteson Connection and the Revised Double Track - Leithton Connection, which were modifications presented by the Applicants after the Draft EIS was issued (Applicants 2008e; Applicants 2008f). As a result of this additional analysis and new information, SEA recommends retaining two land-use mitigation measures from the Draft EIS (regarding construction equipment storage and the Hawthorn Woods scenic corridor along Gilmer Road) and adding three new mitigation measures as conditions for a variety of sensitive land uses. In addition, the Applicants' voluntary mitigation for land use (see Section 4.3.4, Land Use) has been expanded. SEA's recommended conditions (Condition 23 and Conditions 46 through 49) are in Section 4.4.

#### **4.2.6 Socioeconomics and Quality of Life**

In the Draft EIS, SEA identified only minor effects on populations and demographics, economy, taxes, property values, housing, communities and community cohesion, travel patterns, and community facilities and public services. After issuance of the Draft EIS, the Applicants expanded their voluntary mitigation measures relating to schools and parks. The Applicants' revised voluntary mitigation measures would require that they confer with schools and parks within 0.25 mile of the EJ&E rail line about providing fencing along the EJ&E rail line right-of-way. In response to comments on the Draft EIS, SEA prepared additional analysis on school safety, property values, and other quality of life issues for this Final EIS. Based on its analysis, SEA recommends that the Board impose the Applicants' voluntary mitigation and also recommends additional mitigation for schools, parks, and pedestrians. All of this mitigation can be found below (see VM 10 through VM 12, VM 43 and 44, and Conditions 13 through 16, below).

#### **4.2.7 Environmental Justice**

SEA did not identify any disproportionately high and adverse effects on minority or low-income populations in the Draft EIS. However, in recognition of the large Spanish-speaking population in the Chicago metropolitan area and along many segments of the EJ&E rail line, the Applicants committed to distributing all media information in Spanish (see VM 2) and to providing Operation Lifesaver programs in Spanish upon request (see VM 44).

During the preparation of the Draft EIS, SEA conducted environmental justice outreach meetings with leaders who represented community groups and church congregations near the EJ&E rail line. At these meetings, SEA encountered instances when it needed a translator. As a result of this experience, SEA has included in several of its final recommendations requirements that materials and programs be made available in both English and Spanish, upon request. SEA's recommended conditions (Conditions 24 through 26) are in Section 4.4, below.

#### **4.2.8 Energy**

The Applicants proposed voluntary mitigation measures (see VM 73 and VM 74 in Section 4.3) that would increase the use of energy-efficient practices. SEA does not recommend additional mitigation.

#### **4.2.9 Air Quality and Climate**

In addition to the Applicants' voluntary mitigation measures (VM 73 through VM 76, SEA recommends mitigation in Conditions 27 and 28 to further address air quality and climate issues.

#### **4.2.10 Noise and Vibration**

SEA has carefully reviewed the Applicants' voluntary mitigation measures related to noise mitigation (VM 3 through VM 5 and VM 77 through VM 83, below), and believes that they would result in meaningful and appropriate noise reduction. SEA also includes in Section 4.4 mitigation recommendations that are intended to enhance and clarify the Applicants' voluntary mitigation (see Conditions 29 through 31, Condition 50, and Condition 51, below). For example, in addition to VM 80, SEA recommends the Applicants consult with affected communities to identify locations where wheel squeal is considered a nuisance (see Condition 29, below). SEA also recommends a quiet zone condition for Barrington, Illinois (see Condition 10, below).

Based on concerns raised by the Applicants, SEA clarified a proposed recommended condition from the Draft EIS that would have required the Applicants to notify staff at Fermi National Accelerator Laboratory (Fermilab) if operational changes potentially result in an increase in train induced ground-borne vibration. SEA modified that condition to provide examples of activities that would require notification, such as activities that could increase the train induced ground-borne vibrations including but not limited to: higher axle loads; use of larger, more powerful locomotives, and increasing train speeds (see Condition 30, below).

As part of SEA's noise analysis conducted for this Final EIS, SEA identified those locations where there are enough noise impacts to justify mitigation and where cost-effective noise mitigation could be possible. Locations where noise mitigation should be considered are identified on the noise analysis figures located in Appendix A of this Final EIS. Based on this analysis and the Applicants' voluntary mitigation, SEA recommends Condition 31 requiring the Applicants to document their voluntary efforts to provide noise reduction in areas that qualify under IDOT or INDOT criteria.

Finally, SEA recommends Conditions 50 and 51 for Transaction-related construction activities.

#### **4.2.11 Biological Resources**

The Applicants commit to voluntary mitigation measures for effects on biological resources in VM 49 through VM 52, VM 64, VM 84 through VM 88, VM 90, VM 92, VM 95 through VM 97 and VM 102 through VM 108. The Applicants offered VM 49 through VM 52 in response to SEA's recommendations in the Draft EIS.

Based on comments received on the Draft EIS, SEA has recommended conditions to enhance VM 51, VM 64, VM 86, VM 96, and VM 97. SEA also reanalyzed the Applicants' voluntary mitigation measures developed to mitigate the potential effects of the Proposed Action on biological resources in response to Draft EIS comments received on biological resources either during the formal Draft EIS comment period or at SEA's public meetings. As a result, SEA recommends mitigation measures (see Conditions 32 through 38 and 52 through 57, below), to supplement the voluntary mitigation measures to which the Applicants have committed.

During an Illinois Natural Resources and Water Resources stakeholder meeting, several state and regional agencies identified a need to modify the Applicants' VM 64 establishing a Community

Liaison (HDR 2008b). The agencies represented at the stakeholder meeting requested that SEA modify the condition to include a resource-agency-specific liaison(s) who has expertise in environmental and natural resource management. They agreed that the resource agency liaison(s) also should have experience working with the local natural and water resource agencies for the purpose of providing improved adaptive natural resource management and maintaining access agreements. The resource agencies and stakeholders also suggested that monitoring should be conducted to assess the existing conditions and subsequent potential effects on biological resources based on the Proposed Action and proposed construction areas. Further, the Applicants' resource agency liaison(s) should work with the resource agencies to develop protocols for the adaptive natural resource management, monitoring, and tiered-mitigation to address potential effects of the Proposed Action and proposed construction on conservation and natural areas in the Study Area. In response to these concerns, SEA is recommending a condition establishing this resource agency liaison. SEA's recommended condition (Condition 32) can be found in Section 4.4.

In preparing this Final EIS, SEA and the Applicants met with the U.S. Fish and Wildlife Service (USFWS) Chicago, Illinois, Field Office (CIFO), and USFWS Northern Indiana Ecological Services Sub-Office (NIESS), on October 23, 2008 to discuss concerns raised in the U.S. Department of the Interior's comments on the Draft EIS (U.S. Department of the Interior 2008). Specifically, the discussion focused on the Hine's emerald dragonfly, Karner blue butterfly, Indiana bat, Eastern prairie fringed orchid, turtle crossings, and noise effects on migratory birds. SEA met with the USFWS NIESS, The Nature Conservancy (TNC), and INDNR on October 29, 2008, to resolve USFWS NIESS's concerns. The USFWS NIESS determined that no suitable habitat exists for the Eastern prairie fringed orchid in the transaction-related construction areas in Indiana. The group also visited the dune and swale prairie remnant in Kirk Yard in Gary, Indiana, and discussed options for preservation. SEA met in the field with the USFWS CIFO on November 6, 2008, to look at suitable habitat for the Eastern prairie fringed orchid in proposed construction areas along the EJ&E rail line in Illinois. SEA and USFWS CIFO agreed that suitable habitat exists and surveys need to be conducted prior to the start of Proposed Action-related construction (the Biological Report is located in Appendix A of this Final EIS). In November, 2008, SEA and the Applicants consulted with the USFWS CIFO and Midwest Generation regarding effects to the Hine's emerald dragonfly (see Conditions 37 and 38, 52, and 55 related to Federally- or state-listed threatened or endangered species).

Based on extensive informal consultation and the Biological Report submitted to USFWS (See Appendix A of this Final EIS), SEA concludes that the Proposed Action may affect, but is not likely to adversely affect, listed threatened or endangered species. The Applicants provided SEA with additional voluntary mitigation to avoid impacts to Federally- or state-listed threatened or endangered species or other species of concern (Applicants 2008d) (see VM 102 through VM 108, below).

#### **4.2.12 Water Resources**

The Applicants' proposed voluntary mitigation measures (VM 89 through VM 100) are outlined in Section 4.3. The Applicants implemented two of SEA's proposed conditions from the Draft EIS, one regarding compensation for wetland impacts in accordance with USACE regulations (VM 90) and one regarding best management practices (BMPs) for aquatic biota (VM 95). The Applicants' remaining voluntary mitigation measures address a variety of potential stormwater, groundwater, and surface water protection issues. In addition to the Applicants' voluntary mitigation measures for water resources, SEA recommends mitigation in Conditions 39 through 41 and 58 through 63, below.

#### **4.2.13 Cultural Resources**

SEA found that the Proposed Action would not affect any National Register for Historic Places (NRHP)-listed or NRHP-eligible cultural resources. The Indiana Department of Natural Resources,

Division of Historic Preservation and Archeology (INDNR) and the Illinois Historic Preservation Agency concurred with this finding in their letters dated August 27, 2008, and September 29, 2008, respectively (INDNR 2008; Illinois Historic Preservation Agency 2008 in Appendix A). SEA recommends one mitigation measure (Condition 64, below) regarding encountering archeological resources during construction.

#### 4.2.14 Constructions

In the Draft EIS, SEA assessed the potential environmental effects of the proposed connections and their alternative configurations and the double track because these constructions would take place only if the Proposed Action is approved. The Applicants propose mitigation for effects caused by construction in VM 13, VM 45 through VM 49, and VM 52 through VM 72, below. SEA recommends additional mitigation for the effects caused by construction of the proposed connections and double track in Conditions 42 through 64, below.

#### 4.2.15 Monitoring, Enforcement and Decisionmaking Process

SEA's recommended quarterly reporting condition includes a 5-year reporting period (see Conditions 69 and 70, below). Many commenters requested a 10-year or 15-year reporting or oversight period; however, SEA, in most cases, recommends only a 3-year reporting period because that period generally is adequate to assess the full effects of the transaction at issue. In this case, the Applicants plan to implement their operational changes under the Proposed Action over a 3-year period. Based on this, SEA determined that a 5-year reporting period would ensure adequate monitoring of the Applicants' proposed operational changes. If the Board believes that the length of this reporting period is inappropriate, it could adopt a different time period.

Finally, SEA anticipates that the U.S. Environmental Protection Agency (EPA) will publish a notice of the availability of the Final EIS in the *Federal Register* on December 12, 2008. Under the CEQ regulations (40 CFR 1506.10(b)), agencies must wait 30 days from EPA's *Federal Register* notice before issuing a final decision unless they have an internal appeal process. The Board has such a process, which means that the Board could issue a final decision in less than 30 days from December 12, 2008. If the Board were to do so, SEA recommends that the Board's administrative review period be extended to permit parties to seek agency reconsideration of the final decision within 30 days after it is served, rather than the typical 20 days.

#### 4.2.16 Summary of Final Recommended Conditions

Table 4.2-3 summarizes SEA's final recommended conditions by resource area.

<b>Resource Area</b>	<b>Recommended Environmental Conditions<sup>b</sup></b>
Rail Operations	VM 37 through VM 41, 2, 3, 42
Rail Safety	VM 1 through VM 13, 4 through 16, 43
Transportation Systems	VM 27 through VM 48, 17 through 22
Hazardous Waste Sites	44, 45
Land Use	VM 49 through VM 72, 23, 46 through 49
Socioeconomics	VM 10 through VM 12, VM 43, VM 44, VM 64, and VM 65, 13 through 16, 24 through 26
Environmental Justice	VM 64 and VM 65, 24 through 26
Energy	VM 73 and VM 74
Air Quality and Climate	VM 73 through VM 76, 27, 28
Noise and Vibration	VM 3 through VM 5, VM 77 through VM 83, 29 through 31, 50, 51

<b>Resource Area</b>	<b>Recommended Environmental Conditions<sup>b</sup></b>
Biological Resources	VM 49 through VM 52, VM 64, VM 84 through VM 88, VM 90, VM 92, and VM 95 through VM 97, VM 102 through VM 108, 32 through 38, 52 through 57
Water Resources	VM 89 through VM 100, 39 through 41, 58 through 63
Cultural Resources	64
Constructions	VM 13, VM 45 through 49, VM 52 through VM 72, 42 through 64
Negotiated Agreements	65 through 67
Monitoring and Enforcement	VM 101, 68 through 70

Note:

<sup>a</sup> A single recommended condition could mitigate for the effects due to the Proposed Action for more than one resource area.

<sup>b</sup> VM # = Applicants' Voluntary Mitigation Measure; # = SEA's Recommended Condition

## 4.3 Applicants' Voluntary Mitigation Measures

On September 30, 2008, the Applicants submitted extensive voluntary mitigation measures to address a wide variety of environmental effects identified during the environmental review. These measures address issues including safety, transportation systems, hazardous materials, grade crossing delay, commuter passenger rail service, emergency vehicle delay, land use, air quality, noise and vibration, biological resources, and water resources. On November 13, 2008, the Applicants submitted supplementary mitigation measures to address concerns raised by the U.S. Department of the Interior related to potential effects on biological resources. SEA has made some minor editorial clarifications to the Applicants' voluntary mitigation where appropriate and recommends that all of the Applicants' voluntary mitigation be imposed should the Proposed Action be approved.

### 4.3.1 Safety

#### 4.3.1.1 Grade Crossings

- VM 1. Applicants shall consult with appropriate agencies to determine the final design and other details of the grade crossing protections or rehabilitations on EJ&EW's<sup>5</sup> rail line. Implementation of all grade crossing protections shall be subject to the review and approval of the Federal Railroad Administration ("FRA") and the appropriate state Departments of Transportation.
- VM 2. Applicants shall coordinate with the appropriate state departments of transportation, counties, and affected communities along the EJ&E rail line to develop a program for installing temporary notification signs or message boards, where warranted, in railroad right-of-way ("ROW") at highway/rail at-grade crossings, clearly advising motorists of the increase in train traffic on affected rail line segments. The format and lettering of these signs shall comply with the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices* (FHWA 2007b) and shall be in place no less than 30 days before and six months after the acquisition by CN of the control of EJ&EW. The

<sup>5</sup> The Applicants use EJ&EW to refer to EJ&E West Company. EJ&E would transfer all of its land, rail, and related assets located west of the centerline of Buchanan Street in Gary, Indiana, to EJ&E West Company. The Applicants are seeking the Board's approval to acquire control of EJ&E West Company. Should the Board approve the Proposed Action, EJ&E would change its name to Gary Railway and EJ&E West Company would assume the EJ&E Company name. This Final EIS refers to EJ&E West Company as EJ&E.

Applicants shall conduct a media campaign throughout the affected counties and communities surrounding the EJ&E rail line advising the public of increased operations along the EJ&E rail line. The campaign shall include the use of different media (radio, television, newspaper, Internet). Applicants shall distribute all information in both English and Spanish, where appropriate.

- VM 3. Where necessary for implementation of a Quiet Zone,<sup>6</sup> and in consultation with the affected community, FRA, and the appropriate state Department of Transportation, Applicants shall construct or install roadway median barriers to reduce the opportunity for vehicles to maneuver around a lowered gate.
- VM 4. Applicants shall cooperate with the municipalities affected to determine which improvements would be necessary for existing Quiet Zones to maintain FRA compliance.
- VM 5. Applicants shall cooperate with interested communities for the establishment of Quiet Zones and assist in identifying supplemental or alternative safety measures, practical operational methods, or technologies that may enable the community to establish Quiet Zones.
- VM 6. Applicants shall consult with affected communities to improve visibility at highway rail at-grade crossings by clearing vegetation or installing lighting to illuminate passing or stopped trains.
- VM 7. Within 6 months of acquisition by CN of the control of the EJ&EW, Applicants shall cooperate with the Illinois Department of Transportation, Indiana Department of Transportation and other appropriate local agencies to coordinate a review of corridors surrounding highway/rail at-grade crossings to examine safety and adequacy of the existing warning devices, and identify remedies to improve safety for highway vehicles.
- VM 8. Where grade-crossing rehabilitation is agreed to, Applicants shall assure that rehabilitated roadway approaches and rail line crossings meet or exceed the standards of the State Department of Transportation's rules, guidelines, or statutes, and the American Railway Engineering and Maintenance of Way Association ("AREMA") standards, with a goal of eliminating rough or humped crossings to the extent reasonably practicable.
- VM 9. For each of the public grade crossings on EJ&EW's rail line, Applicants shall provide and maintain permanent signs prominently displaying both a toll-free telephone number and a unique grade-crossing identification number in compliance with Federal Highway Regulations (23 C.F.R. Part 655). The toll-free number shall enable drivers to report accidents, malfunctioning warning devices, stalled vehicles, or other dangerous conditions and shall be answered 24 hours per day by Applicants' personnel. At crossings where EJ&EW's ROW is close to another rail carrier's crossing, Applicants shall coordinate with the other rail carrier to establish a procedure and share information regarding reported accidents and grade-crossing device malfunctions.
- VM 10. Within 6 months of acquisition by CN of the control of EJ&EW, Applicants shall cooperate with school and park districts to provide fencing where schools or parks are within one-quarter mile of the right of way and to identify at-grade crossings where additional pedestrian warning devices may be warranted.
- VM 11. Applicants shall continue ongoing efforts with community officials to identify elementary, middle, and high schools within 0.5 miles of EJ&EW's ROW and provide,

---

<sup>6</sup> A Quiet Zone is a location along a rail line where horns are not sounded at highway/rail at-grade crossings.

upon request, informational materials concerning railroad safety to such identified schools.

- VM 12. Within 6 months of the effective date of the Board’s final decision, Applicants shall initiate review of the locations of designated pedestrian and recreational trail at-grade crossings along the EJ&E rail line that would see an increase in train traffic under the Proposed Action. The Applicants shall cooperate in the review with local agencies and community trail groups to assess the adequacy of the existing warning devices, to ascertain if particular trail uses or issues reduce the effectiveness of these warning devices, and to identify appropriate remedies to improve safety for pedestrian and recreational trail users.

**4.3.1.2 Construction**

- VM 13. Before starting any construction activities for the proposed connections or installation of double track, Applicants shall develop – in conjunction with the affected communities and local fire and emergency response departments along the EJ&E rail line – an adequate plan for fire prevention and suppression and subsequent land restoration during construction and operation along the EJ&E rail line. Applicants shall submit the plan to local communities and local fire and emergency response departments. Applicants’ plan shall ensure that all non-turbocharged locomotives are equipped with functional spark arrestors on exhaust stacks, and carry fire extinguishers suitable for flammable liquid fires, electrical fires, and combustible materials fires, as well as provide for the installation of low-spark brake shoes on all locomotives.

**4.3.2 Hazardous Materials Transportation**

- VM 14. Applicants shall comply with the current Association of American Railroads (“AAR”) “key route” guidelines, found in AAR Circular No. OT-55-I, and any subsequent revisions.
- VM 15. Applicants shall comply with the current AAR “key train” guidelines, found in AAR Circular No. OT-55-I, and any subsequent revisions.
- VM 16. To the extent permitted and subject to applicable confidentiality limitations, Applicants shall distribute to each local emergency response organization or coordinating body in the communities along the key routes a copy of the Applicants’ current Hazardous Materials Emergency Response Plans.
- VM 17. Applicants shall incorporate EJ&EW into their existing Hazardous Materials Emergency Response Plan.
- VM 18. Applicants shall comply with all hazardous materials regulations of the United States Department of Transportation (including the Federal Railroad Administration and the United States Pipeline and Hazardous Materials Safety Administration) and Department of Homeland Security (including the Transportation Security Administration). Applicants shall dispose of all materials that cannot be reused in accordance with applicable law.
- VM 19. Upon request, Applicants shall implement real-time or desktop simulation emergency response drills with the voluntary participation of local emergency response organizations.
- VM 20. Applicants shall continue their ongoing efforts with community officials to identify the public emergency response teams located along EJ&EW and shall provide, upon request, hazardous material training.

- VM 21. Applicants shall conduct Transportation Community Awareness and Emergency Response Program (TRANSCAER) workshops (training for communities through which dangerous goods are transported) in those communities along the EJ&E rail line that request this training.
- VM 22. Applicants shall assist in the hazardous materials training emergency responders for affected communities that express an interest in such training. Applicants shall support through funding or other means the training of one representative from each of the communities located along the EJ&E rail line segments where the transportation of hazardous materials would increase. Applicants shall complete the training within 3 years from the date that the Applicants initiate operational changes associated with the Proposed Action.
- VM 23. Applicants shall develop internal emergency response plans to allow for agencies to be notified in an emergency, and to locate and inventory the appropriate emergency equipment. Applicants shall provide the emergency response plans to the relevant state and local authorities within 6 months of acquisition by CN of the control of EJ&EW.
- VM 24. Applicants shall provide dedicated toll-free telephone number to the emergency response organizations or coordinating bodies responsible for communities located along the EJ&E rail line. This telephone number shall provide access to applicant personnel 24 hours per day, seven days a week, enabling local emergency response personnel to obtain and provide information quickly regarding the transport of hazardous materials on a given train and appropriate emergency response procedures should a train accident or hazardous materials release occur.
- VM 25. In accordance with their Emergency Response Plan, Applicants shall make the required notifications to the appropriate Federal and state environmental agencies in the event of a reportable hazardous materials release. Applicants shall work with the appropriate agencies such as the United States Fish and Wildlife Service, Illinois Environmental Protection Agency and Indiana Department of Environmental Management to respond to and remediate hazardous materials releases with the potential to affect wetlands or wildlife habitat(s), particularly those of federally threatened or endangered species.
- VM 26. Prior to initiating any Transaction<sup>7</sup>-related construction activities, Applicants shall develop a spill prevention plan for petroleum products or other hazardous materials during construction activities. At a minimum, the spill prevention plan shall address the following:
- Definition of what constitutes a reportable spill;
  - Requirements and procedures for reporting spills to appropriate government agencies;
  - Methods of containing, recovering, and cleaning up spilled material;
  - Equipment available to respond to spills and location of such equipment; and
  - List of government agencies and Applicants' management personnel to be contacted in the event of a spill. In the event of a reportable spill, Applicants shall comply with their spill prevention plan and applicable Federal, state, and local regulations pertaining to spill containment and appropriate clean-up.

---

<sup>7</sup> The Applicants use the term Transaction to refer to the Proposed Action. This Final EIS uses the term Proposed Action to define the Applicants' proposal to acquire the EJ&E rail line, land, and related assets.

### 4.3.3 Transportation Systems

#### 4.3.3.1 *Grade Crossing Delay*

- VM 27. Applicants shall comply with the Voluntary Mitigation Agreement concluded with the City of Joliet, which among other things addresses delay at the public highway/rail at-grade crossings at Woodruff Road and Washington Street.
- VM 28. Although Applicants have not identified any grade crossings, other than Woodruff Road and Washington Street, that would require mitigation under SEA's established standards,<sup>8</sup> Applicants shall, upon request, cooperate with municipalities and counties in support of their efforts to secure funding, in conjunction with appropriate state agencies, for grade separations where they may be appropriate under criteria established by relevant state Department of Transportation. Applicants shall contribute their statutorily required amount of funding<sup>9</sup> to the cost of the grade separation.
- VM 29. Applicants shall examine train operations for ways of reducing highway/rail at-grade crossing blockages.
- VM 30. Applicants shall cooperate with the appropriate state and local agencies and municipalities to:
- Evaluate the possibility that one or more roadways listed in Table ES-1 [of the Draft EIS] could be closed at the point where it crosses the EJ&E rail line, in order to eliminate the at-grade crossing.
  - Improve or identify modifications to roadways that would reduce vehicle delays by improving roadway capacity over the crossing by construction of additional lanes.
  - Assist in a survey of highway/rail at-grade crossings for a determination of the adequacy of existing grade crossing signal systems, signage, roadway striping, traffic signaling inter-ties, and curbs and medians.
  - Identify conditions and roadway, signal, and warning device configuration may trap vehicles between warning device gates on or near the highway/rail at-grade crossing.
  - Cooperate with state and local agencies to develop and implement a plan to grade-separate the highway/rail crossing.
- VM 31. Applicants shall install power switches along EJ&EW where Applicants determine that manual switches could cause stopped trains to block grade crossings for excessive periods of time and that power switches would increase the speed of rail traffic and reduce the likelihood of such blockages.
- VM 32. In order to minimize the number of trains being stopped by operators at locations that block grade crossings on the EJ&EW system, Applicants shall work with other railroads to establish reasonable and effective policies and procedures to prevent other railroads' trains from interfering with Applicants' trains on EJ&EW.

---

<sup>8</sup> SEA's environmental rules are silent on standards for at-grade crossing delay. Applicants frequently use criteria established in prior transactions as a basis for evaluating impacts.

<sup>9</sup> The Applicants' statutorily required amount of funding typically is 5 percent of the total cost of the grade-separated crossing.

- VM 33. Applicant's design for wayside signaling systems shall be configured and implemented to minimize the length of time that trains or maintenance-of-way vehicles or activities occupy at-grade crossings or unnecessarily activate grade-crossing warning devices.
- VM 34. Applicants shall install control signals ("A" block or absolute stop signals) at the ends of sidings, double track sections, crossovers, and other control switch locations (Applicants 2008a).
- VM 35. Applicants shall operate under U.S. Operating Rule No. 526 (Public Crossings), which provides that a public crossing must not be blocked longer than 10 minutes unless it cannot be avoided and that, if possible, rail cars, engines, and rail equipment may not stand closer than 200 feet from a highway/rail at-grade crossing when there is an adjacent track (Applicants 2008a). If the blockage is likely to exceed this time frame, then the train shall then be promptly cut to clear the blocked crossing or crossings.
- VM 36. Applicants shall develop and submit to SEA a report on frequency and duration of trains delay at crossing for a period covering the first three years of operational changes.

#### **4.3.3.2 Commuter and Passenger Rail Service**

- VM 37. Applicants shall abide by the commitment made to Amtrak in a letter dated March 10, 2008 concerning Amtrak's use of the St. Charles Air Line (Air Line). In general, the commitment allows Amtrak to remain indefinitely on the Air Line after CN's trains are re-routed from the Air Line onto the EJ&E rail line should the Proposed Action be approved and implemented, thereby preserving Amtrak's access to Chicago's Union Station and Amtrak's ability to continue to provide service to and from points such as Champaign and Carbondale, Illinois. Applicants shall abide by the commitment to capping the cost to Amtrak for maintaining the Air Line at the current level, indexed for inflation (Applicants 2008p).
- VM 38. Applicants shall operate the key interlockings at West Chicago and Barrington, Illinois, according to the current agreements under which EJ&E operates. Those agreements require EJ&E to give priority to passenger trains over either UP or EJ&E freight trains (Applicants 2008k).
- VM 39. Applicants shall work with Metra to explore all options for service on the proposed STAR Line, including use of the EJ&E rail line. The timing and implementation of STAR Line service remain subject to numerous variables, including securing government funding, but the Applicants are committed to continuing discussions with Metra on the STAR Line (Applicants 2008j).
- VM 40. During and after construction, Applicants shall maintain the pedestrian tunnel from the Metra Park-n-Ride lot to the Metra train station on the east side of the Chicago Subdivision rail line at Matteson (Applicants 2008l).
- VM 41. Applicant shall comply with any written and executed curfew agreements that are now in effect regarding operations affecting passenger or commuter train service.

#### **4.3.3.3 Emergency Vehicle Delay**

- VM 42. Applicants shall notify Emergency Services Dispatching Centers for communities along the affected segments of all crossings blocked by trains that are stopped and may be unable to move for a significant period of time. Applicants shall work with affected communities to minimize emergency vehicle delay by maintaining facilities for emergency communication with local Emergency Response Centers through a dedicated

- toll-free telephone number; and providing, upon request, dispatching monitors that allow Emergency Response Center dispatching personnel to see real-time train locations.
- VM 43. Applicants shall make Operation Lifesaver programs available to communities, schools, and other organizations located along the affected segments.
- VM 44. For up to 3 years after acquisition by CN of the control of the EJ&EW, Applicants shall provide Operation Lifesaver programs in Spanish, upon request.

#### **4.3.3.4 Construction**

- VM 45. At least one month prior to initiation of Transaction-related construction activities, Applicants shall provide the information described below regarding Transaction-related construction of sidings, double-tracking, or connections, as well as any additional information, as appropriate, to fire departments and the Local Emergency Planning Commissions (“LEPC”) for communities within or adjacent to the construction area:
- The schedule for construction throughout the project area, including the sequence of construction work relating to public grade crossings and approximate schedule for these activities at each crossing;
  - A toll-free number to contact Applicants’ personnel, to answer questions or attend meetings for the purpose of informing emergency-service providers about the project construction and operations; and
  - Revisions to this information, including changes in construction schedule, as appropriate.
- VM 46. In undertaking Transaction-related construction activities, Applicants shall use practices recommended by AREMA and recommended standards for track construction in the AREMA Manual for Railway Engineering.
- VM 47. During Transaction-related construction concerning at-grade crossings, when reasonably practicable, Applicants shall consult with the appropriate state Department of Transportation regarding detours and associated signage, as appropriate, or maintain at least one open lane of traffic at all times to allow for the quick passage of emergency and other vehicles.
- VM 48. Applicants shall minimize temporary road closures during construction activities associated with the connections and double track. Applicants shall manage construction schedules to:
- Minimize highway/rail at-grade crossing closures
  - Relay highway/rail at-grade crossing closure schedules to local emergency service providers

#### **4.3.4 Land Use**

##### **4.3.4.1 General Land Use**

- VM 49. Before beginning construction activity, Applicants shall survey all suitable habitats potentially impacted by the construction activity for Federally- and state-listed threatened or endangered plant species. If any listed plant species are located, Applicants shall implement a mitigation plan in consultation with the appropriate Federal and state agencies.

- VM 50. If identified in the area, Applicants shall coordinate with USFWS-Indiana and The Nature Conservancy (TNC) to monitor effects on the Karner blue butterfly in the West Gary Recovery Unit.
- VM 51. Applicants shall continue with the existing agreements for Paul Ales Branch operation for the protection of the Federally-listed Hine's emerald dragonfly.
- VM 52. Applicants shall identify suitable habitat for Franklin's ground squirrel within construction limits, and minimize mowing along the ROW beyond what is necessary for reasonable railroad maintenance and safety.
- VM 53. Land areas that are directly disturbed by Applicants' Transaction-related construction and are not owned by the Applicants (such as access roads, haul roads, and crane pads) shall be restored to their original condition, as may be reasonably practicable, upon completion of Transaction-related construction.
- VM 54. During construction, temporary barricades, fencing, and/or flagging shall be used in sensitive habitats to contain construction-related impacts to the area within the construction Right Of Way ("ROW"). Staging areas shall be located in previously disturbed sites and not in sensitive habitat areas.
- VM 55. To the extent reasonably practicable, Applicants shall confine construction traffic to a temporary access road within the construction ROW or established public roads. Where traffic cannot be confined to temporary access roads or established public roads, Applicants shall make necessary arrangements with landowners to gain access from private roadways. The temporary access roads shall be used only during project-related construction. Any temporary access roads constructed outside the rail line ROW shall be removed and restored upon completion of construction unless otherwise agreed to with the landowners.
- VM 56. During Transaction-related earthmoving activities, Applicants shall remove topsoil and segregate it from subsoil. Applicants shall also stockpile topsoil for later application during reclamation of disturbed areas along the ROW. Applicants shall place the topsoil stockpiles in areas that would minimize the potential for erosion and use appropriate erosion control measures around all stockpiles to prevent erosion.
- VM 57. Applicants shall commence reclamation of disturbed areas as soon as reasonably practicable after Transaction-related construction ends along a particular stretch of rail line. The goal of reclamation shall be the rapid and permanent reestablishment of native ground cover on disturbed areas. If weather or season precludes the prompt reestablishment of vegetation, Applicants shall use measures such as mulching or erosion control blankets to prevent erosion until reseeding can be completed.
- VM 58. Applicants shall limit ground disturbance to only the areas necessary for Transaction-related construction activities.
- VM 59. Applicants shall review the limits of land disturbance prior to construction to determine whether any U.S. Department of Commerce, National Geodetic survey monuments (that is, a government owned permanent survey marker) would be disturbed. If any survey monuments would be disturbed, Applicants shall give a 90-day notification to the U.S. Department of Commerce.
- VM 60. Applicants shall consult with the appropriate state, county personnel, Forest Preserve and trail managers prior to construction activities on state land and shall flag the boundaries of the ROW.

- VM 61. Applicants shall notify the trail managers of new construction that intersects trails during final design. Where possible, Applicants shall maintain access to all existing trails, greenways, and scenic corridors during construction. If temporary trail closures are required during construction, Applicants shall provide appropriate signage to detour pedestrian and recreational trail users to a safe alternate route.
- VM 62. Before construction of the Applicants' Proposed Munger Connection adjacent to the Pratt's Wayne Woods Forest Preserve, Applicants shall flag the boundaries of the CN ROW, the EJ&E ROW, and the portion of the Commonwealth Edison ROW required for construction. Applicant shall remain within the flagged boundaries. Unless agreed by the Forest Preserve Management, no construction shall take place outside of the flagged construction area. Where possible, Applicants shall maintain access during construction activities to all existing roads, trails, and facilities within the Pratt's Wayne Woods Forest Preserve.
- VM 63. Applicants shall require contractors to dispose of waste generated during Transaction-related construction activities in accordance with all applicable Federal, State, and local regulations.

**4.3.4.2 Community Outreach**

- VM 64. Prior to initiation of Transaction-related construction activities, Applicants shall name a Community Liaison to: consult with affected communities, businesses, and agencies; seek to develop cooperative solutions to local concerns regarding construction activities; be available for public meetings; and conduct periodic public outreach regarding Transaction-related construction activities. The Community Liaison shall be available to consult with businesses and agencies until all Transaction-related construction activities are complete. Applicants shall provide the name and phone number of the Community Liaison to mayors and other appropriate local officials in each community where Transaction-related construction activities will occur.
- VM 65. Applicants shall continue their ongoing community outreach efforts by maintaining, throughout the period of construction of Transaction-related sidings, double-track, and connections, a website about the construction.

**4.3.4.3 Residential**

- VM 66. Applicants' Transaction-related construction vehicles, equipment, and workers shall not access work areas by crossing residential properties without the permission of the property owner or occupant.

**4.3.4.4 Business and Industrial**

- VM 67. Applicants' Transaction-related construction vehicles, equipment, and workers shall not access work areas by crossing business or industrial areas, including parking areas or driveways, without advance notice to the business owner.
- VM 68. Applicants shall work with affected businesses or industries to appropriately redress Transaction-related construction activity issues affecting any business or industry.
- VM 69. To the extent reasonably practicable, Applicants shall ensure that entrances and exits for businesses are not obstructed by Transaction-related construction activities, except as required to move equipment.

**4.3.4.5 State Lands**

- VM 70. Applicants shall consult with the General Land Office (“GLO”) of Illinois to coordinate an Easement Agreement for crossing State-owned parks to reach Transaction-related construction areas.

**4.3.4.6 Utility Corridors**

- VM 71. Applicants shall make reasonable efforts to identify all utilities that are reasonably expected to be materially affected by the proposed construction within their existing ROW or that cross their existing ROW. Applicants shall notify the owner of each such utility identified prior to commencing Transaction-related construction activities and coordinate with the owner to minimize damage to utilities. Applicants shall also consult with utility owners to design the rail line so that utilities are reasonably protected during Transaction-related construction activities.
- VM 72. Applicants shall use the services of a qualified pipeline engineering firm that is familiar with the project area to assist in the identification of the various pipeline crossings and to assist in the design of crossings as necessary for Transaction-related construction activities.

**4.3.5 Air Quality**

- VM 73. Applicants shall accelerate implementation of EPA locomotive emissions reduction efforts<sup>10</sup> by installing idling control systems on their switching locomotives assigned to the Chicago area and shall accelerate replacement of switching locomotives that are excluded from EPA emission standards and are now in service at Chicago-area yards that will experience increased yard activity as a result of the Transaction with locomotives that are compliant with EPA Tier 0 or more stringent emission standards.
- VM 74. Applicants, to the extent reasonably practicable, shall adopt efficient fuel saving practices that may include a range of operating practices that will help reduce locomotive emissions, such as shutting down locomotives when not in use and when temperatures are above 40 degrees.
- VM 75. To minimize fugitive dust emissions created during Transaction-related construction activities, Applicants shall implement appropriate fugitive dust suppression controls, such as spraying water or other approved measures. Applicants shall also regularly operate water trucks on haul roads to reduce dust.
- VM 76. Applicants shall work with their contractors to make sure that construction equipment is properly maintained and that mufflers and other required pollution-control devices are in working condition in order to limit construction-related air emissions.

**4.3.6 Noise and Vibration**

- VM 77. Applicants shall work with affected communities that have sensitive receptors that would experience an increase of at least 5 dBA [A-weighted decibel] and reach 70 dBA to mitigate train noise to levels as low as 70 dBA by cost effective means as are agreed to by an affected community and Applicants. In the absence of such an agreement, Applicants shall implement cost effective mitigation that could include such measures as (1) constructing noise control devices such as noise barriers, (2) installing vegetation or

---

<sup>10</sup> EPA has issued rules designed to reduce locomotive emissions over time.

- berming, or (3) installing, or providing funding for installation of, enhanced warning devices in order to provide the level of warning necessary to allow the community to request a waiver from Federal Railroad Administration (FRA) of the requirement to sound the horn and achieve quiet zone requirements.
- VM 78. Applicants shall consult with affected communities and work with their construction contractors to minimize, to the extent reasonably practicable, construction-related noise disturbances near any residential areas.
- VM 79. Applicants shall work with their construction contractors to maintain Transaction-related construction and maintenance vehicles in good working order with properly functioning mufflers to control noise.
- VM 80. In addition to the development of other noise mitigation measures, Applicants shall consider lubricating curves where doing so would both be consistent with safe and efficient operating practices and significantly reduce noise for residential or other noise sensitive receptors. Applicants shall also continue to employ safe and efficient operating procedures that, in lieu of, or as complement to, other noise mitigation measures can have the collateral benefit of effectively reducing noise from train operations. Such procedures include:
- inspecting rail car wheels to maintain wheels in good working order and minimize the development of wheel flats;
  - inspecting new and existing rail for rough surfaces and, where appropriate, grinding these surfaces to provide a smooth rail surface during operations;
  - regularly maintaining locomotives, and keeping mufflers in good working order; and
  - removing or consolidating switches determined by Applicants to no longer be needed.
- VM 81. To minimize noise and vibration, Applicants shall install and maintain rail and rail beds according to AREMA standards.
- VM 82. Applicants shall comply with FRA regulations establishing decibel limits for train operations.
- VM 83. Applicants shall install or relocate a Wheel Impact Load Detector (WILD) on the EJ&E rail line within three years of acquisition by CN of control of EJ&EW.

#### **4.3.7 Biological Resources**

- VM 84. For impacts to non-jurisdictional isolated wetlands habitat along the new line, Applicants shall survey the route to determine if the Hines Emerald Dragonfly is present along the ROW.
- VM 85. Upon consultation with U.S. Fish and Wildlife Service, should the Hines Emerald Dragonfly be observed on the site of Transaction-related construction activities, Applicants shall implement appropriate measures prior to and during construction to reduce or eliminate impacts on the Hines Emerald Dragonfly.
- VM 86. Prior to initiating Transaction-related construction activities, Applicants shall consult with the local offices of the Natural Resource Conservation Service (“NRCS”) to develop an appropriate plan for restoration and re-vegetation of the disturbed areas (including appropriate seed mix specifications).

- VM 87. During construction activity, Applicants shall take reasonable steps to ensure contractors use fill material appropriate for the project area.
- VM 88. Applicants shall, to the extent reasonably practicable, revegetate the bottom and sides of the drainage ditches using natural recruitment from the native seed sources in the stockpiled topsoil.

#### **4.3.8 Water Resources**

- VM 89. In the case where there is a potential for a railroad drainage ditch to influence wetland hydrology, Applicants shall construct low permeability clay berms (wetland berms adjacent to the drainage channels that would be proximal to the isolated wetlands). These berms would minimize the impact to surface water drainage from the proposed drainage ditch.
- VM 90. Applicants shall compensate in accordance with USACE regulations in both Illinois and Indiana for wetland impacts that cannot be avoided and for impacts that are determined by USACE to be on waters of the U.S. for construction related to the proposed action.
- VM 91. Applicants shall maintain drainage ditches as permanent vegetated swales to provide storm water retention and treatment. Removal of accumulated sediments shall be conducted only as necessary to maintain storm water retention capacity and function.
- VM 92. To minimize sedimentation into streams and waterways during construction, Applicants shall use best management practices, such as silt fences and straw bale dikes, to minimize soil erosion, sedimentation, runoff, and surface instability during project-related construction activities. Applicants shall seek to disturb the smallest area possible around any streams and shall conduct reseeded efforts to ensure proper revegetation of disturbed areas as soon as reasonably practicable following Transaction-related construction activities.
- VM 93. In order to control erosion, Applicants shall establish staging and lay down areas for Transaction-related construction material and equipment at least 300 feet from jurisdictional waters of the United States and in areas that are not environmentally sensitive. Applicants shall not clear any vegetation between the staging area and the waterway or wetlands. To the extent reasonably practicable, areas with non-jurisdictional isolated waters will not be used for staging and lay down and will only be impacted when necessary for construction. When Transaction-related construction activities, such as culvert and bridgework, require work in streambeds, Applicants shall conduct these activities, to the extent reasonably practicable, during low-flow conditions.
- VM 94. During Transaction-related construction activities, Applicants shall require all contractors to conduct daily inspections of all equipment for any fuel, lube oil, hydraulic, or antifreeze leaks. If leaks are found, Applicants shall require the contractor to immediately remove the equipment from service and repair or replace it.
- VM 95. Applicants shall employ best management practices to control turbidity and disturbance to bottom sediments of surface waters during Transaction-related construction. Applicants shall implement best management practices in wetlands or other waters of the United States to avoid adverse downstream impacts on fish, mussels, and other aquatic biota.
- VM 96. Applicants shall implement their current noxious weed control program during construction and operation of Transaction-related sidings, double-track, and connections. All herbicides used by Applicants shall be approved by the U.S. EPA.

- VM 97. Applicants shall ensure that any herbicides used in ROW maintenance to control vegetation are approved by the U.S. EPA and are applied by licensed individuals who shall limit application to the extent necessary for rail operations. Herbicides shall be applied so as to prevent or minimize drift off of the ROW onto adjacent areas.
- VM 98. During construction, Applicants shall prohibit Transaction-related construction vehicles from driving in or crossing streams at other than established crossing points.
- VM 99. Applicants shall, to the extent reasonably practicable, ensure that any fill placed below the ordinary high water line of wetlands and streams is appropriate material selected to minimize impacts to the wetlands and streams. All stream crossing points shall be returned to their pre-construction contours to the extent reasonably practicable and the crossing banks will be reseeded or replanted with native species immediately following project-related construction.
- VM 100. Applicants shall obtain a National Pollutant Discharge Elimination System (“NPDES”) storm water discharge permit from U.S. EPA or appropriate State agencies for Transaction-related construction activities.

#### **4.3.9 Monitoring and Enforcement**

- VM 101. Applicants shall submit quarterly reports to SEA on the progress of, implementation of, and compliance with the mitigation measures for a period covering the first three years of operational changes.

#### **4.3.10 Supplemental Voluntary Mitigation Measures**

- VM 102. Applicants shall cooperate with Midwest Generation, LLC (“MWG”), to identify locations on Applicants’ property, or available to Applicants, on which loaded coal trains could be staged while awaiting delivery to MWG’s Will County Generating Station and Joliet Generating Station and which would make unnecessary the construction of additional train storage capacity on MWG property that would adversely affect the Hine’s emerald dragonfly or its habitat. If no adequate existing train storage locations can be identified, Applicants shall make reasonable efforts to acquire or construct, at MWG’s expense, new train storage capacity, at locations where construction would not have adverse impacts on the Hine’s emerald dragonfly or its habitat, and which would make construction of additional storage capacity on MWG’s property unnecessary, and shall make that capacity available as needed for staging of coal trains destined for Will County and Joliet Stations.
- VM 103. In consultation with the U.S. Fish and Wildlife Service (USFWS) and relevant natural resource stakeholders, Applicants shall participate in the development of a Habitat Conservation Plan for the Hine’s emerald dragonfly or necessary work plans applicable to State and Federally listed threatened and endangered species and take the necessary measures to ensure that rail operations do not cause undue impact to those species.
- VM 104. [Migratory Birds] Where warranted, Applicants shall work with relevant natural resource stakeholder groups, Forest Preserve Districts, the Indiana office of The Nature Conservancy (TNC), Illinois Department of Natural Resources (IDNR), Indiana Department of Natural Resources (INDNR), and USFWS to support the creation or enhancement of migratory bird habitat away from those segments of the EJ&E rail line on which Applicants project Transaction-related increases in rail traffic, and where there is proposed Transaction-related construction of double-track and new or improved connections.

- VM 105. [Rare and Listed Turtles] In consultation with USFWS, Applicants shall construct and maintain adequate passages (that is, pipes or culverts) for turtles to cross through the track bed in areas on the EJ&E rail line between Leithton and Gary on which Applicants expect to increase rail traffic and where habitat for rare and/or listed turtle species (that is, Blanding's or spotted turtle) exists on both sides of the rail line.
- VM 106. [Karner Blue Butterfly] In consultation with USFWS, Applicants shall identify areas of suitable habitat of the Karner blue butterfly within Kirk Yard and in the vicinity of all planned Transaction-related construction of double track and new or improved connections within the State of Indiana for potential habitat protection and/or enhancement. Applicants shall contact TNC about participation in the Safe Harbor Agreement for the Karner blue butterfly.
- VM 107. [Indiana Dune and Swale] In consultation with appropriate Federal and State natural resource stakeholders, including USFWS, INDNR and TNC, Applicants shall designate EJ&EW-owned areas of prime prairie and dune swale habitat for potential land management agreement and/or conservation easement. Should modifications to Kirk Yard be proposed in the future, Applicants shall review proposed plans for upgrading and expansion of Kirk Yard in order to avoid construction in identified dune swale areas. In the event that unavoidable impacts are identified, the Applicants shall work with TNC to develop a plan for mitigation of those impacts and improvement of the quality of remaining dune swale areas.
- VM 108. [Eastern prairie fringed orchid] Prior to any ground disturbing activities, Applicants shall hire a qualified biologist to survey for the Eastern prairie fringed orchid (*Platanthera leucophaea*) in areas containing suitable habitat. Applicants shall survey each area on at least three non-consecutive days between June 28 and July 11, as this is when the orchid typically flowers and is most identifiable. If the Applicants' biologist finds orchids, Applicants shall not conduct any construction activities in that area and Applicants shall notify USFWS and the Board immediately. The Board shall reinitiate consultation with USFWS. Applicants shall work with the Board and USFWS to determine appropriate measures to offset impacts, most likely providing funding for an ongoing hand pollination project, or providing funding to be used to enhance another orchid site (that is, brush cutting, prescribed burning).

## **4.4 SEA's Final Recommended Mitigation Measures**

- 1) Applicants shall comply with their voluntary mitigation measures.

### **4.4.1 Rail Operations**

- 2) As part of the Applicants' quarterly reports that would be required under VM 101, VM 36, and Condition 70, Applicants shall report quarterly to SEA and communities adjacent to or intersected by the EJ&E rail line on the frequency, cause, and duration of train blockages of crossings of 10 minutes in duration or greater, listing each delay and including any notifications from persons affected by the blockage and the time of the beginning and end of each delay. Applicants shall summarize the cause of each type of blockage that the Applicants self-report and shall state how the Applicants intend to reduce the incidence of all blockages not attributed to emergencies or weather-related incidents (sometimes called Acts of God) in the quarterly report.
- 3) Applicants shall distribute to communities adjacent to or intersected by the EJ&E rail line the contact information for the Applicants' community liaison established in VM 64 to

ensure that Applicants are aware of highway/rail at-grade crossing blockages lasting 10 minutes or more.

#### **4.4.2 Rail Safety**

##### **4.4.2.1 Safety Integration Plan**

- 4) Applicants shall comply with their approved final Safety Integration Plan (SIP), prepared pursuant to 49 CFR 1106, which may be modified and updated as necessary to respond to evolving conditions.
- 5) Applicants shall continue to coordinate with FRA in implementing the approved final SIP, including any amendments thereto. The ongoing safety integration process shall continue until FRA notifies the Board that the integration of the Applicants' operations has been safely completed.

##### **4.4.2.2 Freight Rail Safety**

- 6) Applicants shall adhere to all applicable Federal Occupational Safety and Health Administration (OSHA), FRA, and state construction and operational safety regulations to minimize the potential for accidents and incidents on the EJ&E rail line.

##### **4.4.2.3 Vehicle Safety**

###### *High Accident Frequencies*

- 7) If Applicants have not initiated a corridor study (as committed to in VM 7) in Griffith, Indiana, within 6 months of the effective date of the Board's final decision, or if the appropriate road authority having jurisdiction over the roadway prefers, Applicants shall meet with the appropriate road authority, Indiana Department of Transportation (INDOT), the City of Griffith, and other appropriate local agencies and shall participate in an on-site diagnostic review of the Lake Street and Miller Street highway/rail at-grade crossings. The purpose of the diagnostic review would be to examine the adequacy of the existing warning devices, to ascertain if there are particular roadway uses or localized issues that would reduce the effectiveness of these warning devices, to prescribe appropriate remedies to improve safety for highway vehicles, and to establish the time frame and funding for identified improvements. Because the at-grade crossings at Lake Street and Miller Street are less than 0.25 mile apart, the diagnostic review shall consider closure of one at-grade crossing or the other and make appropriate improvements to the other. In the absence of any other funding agreements, Applicants' funding participation for any improvements shall be limited to the cost of installation of a standard, automatic flashing light signal and automatic half roadway, gate-warning devices at one highway/rail at-grade crossing.
- 8) If the Applicants and the appropriate agencies do not come to an agreement concerning Lake Street and Miller Street within 2 years of the effective date of the Board's final decision, Applicants, with the concurrence of the other parties, shall participate in and assume the cost of binding arbitration or mediation to determine a solution for Lake Street and Miller Street, without further involvement or review by the Board. Applicants shall notify the Board within 30 days of completing the negotiations, the arbitration, or the mediation.

*Industry Track*

- 9) As requested by the Illinois Commerce Commission (ICC), Applicants shall notify ICC prior to modifying rail service to existing rail shippers along the EJ&E rail line during the morning and evening commuter rush hours, in areas where: 1) industry tracks cross highway/rail at-grade crossings, and 2) those industry track highway/rail at-grade crossings are protected with warning devices that are not interconnected with or part of the warning devices at a highway/rail at-grade crossing of the same roadway located within 300 feet which experiences commuter rail traffic. Before modifying the rail service Applicants shall, allow ICC to review the adequacy of the highway/rail at-grade crossing warning devices and abide by the ICC's reasonable determination(s), including contributing to funding any required modifications.

**4.4.2.4 Quiet Zones**

- 10) Applicants shall work with Barrington, Illinois, to determine which improvements would be necessary for the City to maintain its quiet zone designation, should the transaction cause it to fall out of compliance with FRA regulations. The existing Barrington Quiet Zone includes the highway/rail at-grade crossings at Lake/Cook Road, Otis Road, Penny Road, Old Sutton Road, Shoe Factory Road, Spaulding Road, and West Bartlett Road. For 3 years from the effective date of the Board's final decision, the Applicants shall fund reasonable improvements FRA deems necessary to maintain existing quiet zone.

**4.4.2.5 Hazardous Materials Transportation Safety**

- 11) To supplement Applicants' VM 21, Applicants shall conduct TRANSCAER workshops in English and Spanish upon request for 3 years from the effective date of the Board's final decision authorizing the Proposed Action.
- 12) In addition to Applicants' VM 25, Applicants shall adhere to all EPA regulations as described in 40 CFR 263 and shall coordinate with EPA, state agencies, and local agencies on spill responses.

**4.4.2.6 Pedestrian and Bicycle Safety**

- 13) To supplement Applicants' VM 10, Applicants shall coordinate with each affected community prior to installation of this fencing and shall install fencing where the community deems appropriate. Applicants shall furnish and install at their sole expense a standard 6-foot-high, galvanized, chain-link fence at all locations where an effective fence does not currently exist. Upon completion of construction, the fence shall be owned and maintained by the community unless both parties agree otherwise in writing. The community may decide to install fencing that differs from this standard, but Applicants shall only be obligated to provide funds sufficient to construct the standard fence.
- 14) Applicants shall coordinate with representatives from Camp Manitoqua in Frankfort, Illinois, to determine if fencing is warranted along the camp's property line. If it is, Applicants and Camp Manitoqua shall cooperate to determine a reasonable allocation of construction and maintenance costs, with the Applicants' cost share limited to an amount sufficient to construct the standard fence described in Condition 13, above.
- 15) To supplement Applicants' VM 43 and 44, Applicants shall make Operation Lifesaver programs available to communities, schools, and other appropriate organizations located along the EJ&E rail line for 3 years after the effective date of the Board's final decision. The programs will be designed and provided in coordination with ICC and INDOT.

- 16) To address concerns raised by the U.S. Department of Transportation, Applicants shall either continue EJ&E's practice of holding trains south of Ann Street in West Chicago, Illinois, or work with the community to replace the George Street pedestrian crossing. Ann Street is located approximately 0.1 mile south of the George Street pedestrian crossing and 0.3 mile south of the signal in West Chicago. Applicants shall hold their trains at this location to avoid blocking the at-grade crossing at Ann Street (USDOT # 260545V, MP 28.50), the pedestrian crossing at George Street (USDOT # 260806T, MP 28.27), and the at-grade crossing at Church Street (USDOT # 260543G, MP 28.77). Upon obtaining a clear signal, to the extent possible, Applicants' trains shall not stop and block the at-grade crossings.

#### **4.4.3 Transportation Systems**

##### **4.4.3.1 Regional and Local Highway Systems**

- 17) In addition to VM 28, Applicants shall coordinate with the following state and local officials for the expeditious implementation of a grade separation at:
- The highway/rail at-grade crossing of Ogden Avenue and the EJ&E rail line in Aurora (USDOT # 260560X). Coordinate with DuPage County, Illinois, and Aurora, Illinois, the Illinois Department of Transportation (IDOT), and ICC
  - The highway/rail at-grade crossing of Lincoln Highway (US 30) and the EJ&E rail line in Lynwood (USDOT # 260651D). Coordinate with Cook County, Illinois, Lynwood, Illinois, IDOT, and ICC

The substantial effects of the Proposed Action on traffic delay, regional and local mobility, and grade-crossing safety warrant an increase over the traditional railroad share of the final design and construction cost of grade separations that are approved and funded. As explained in this Final EIS, Applicants' share of the responsibility for total vehicle delay in the Chicago metropolitan area is calculated to be 15 percent. Therefore, Applicants shall contribute 15 percent of the preliminary engineering and environmental analysis, final design, ROW acquisition, utility relocation, and construction costs of these grade separations. This obligation shall be in effect for projects where construction is initiated within 10 years of the effective date of the Board's final decision. SEA anticipates that IDOT would be the lead agency for the development of these grade separations.

- 18) Applicants shall coordinate with IDOT and the appropriate counties and affected communities to develop a program to install traffic advisory signs on roadway ROW at certain public highway/rail at-grade crossings along the EJ&E rail line. These signs shall clearly advise motorists not to block intersections, and the format and lettering of these signs shall comply with FHWA's *Manual on Uniform Traffic Control Devices*. These signs shall be in place within a year of the effective date of the Board's final decision, subject to the approval of the coordinating agencies, and shall be located near the following intersections:
- a. Old McHenry Road/Midlothian Road, Hawthorn Woods, Illinois
  - b. Main Street/IL 22, Lake Zurich, Illinois
  - c. Hough Street (IL 59)/Northwest Highway (US 14), Barrington, Illinois
  - d. Plainfield-Naperville Road/IL 59, Plainfield, Illinois

- 19) Applicants shall construct the revised connection at Matteson, Illinois, and the revised double track connection at Leithton (near Mundelein, Illinois) as described in the Applicants' letters dated August 21, 2008 and September 17, 2008, respectively.
- 20) As requested by ICC, Applicants shall consult with ICC, as well as INDOT, to locate roadway intersections with traffic lights within 1,000 feet of existing highway/rail at-grade crossings along the EJ&E rail line to identify circumstances where queued cars could extend over the EJ&E rail line and to consider reasonable solutions.

#### 4.4.3.2 Emergency Response

- 21) In addition to VM 42, to further assist with the timely response of the emergency service providers listed in Table 4.4-1 below, Applicants shall consult with all appropriate agencies to implement a CCTV system with video cameras placed in locations so that the movement of trains can reasonably be predicted at the highway/rail at-grade crossings listed in Table 4.4-1. Applicants shall pay for the necessary equipment, including cameras, monitors, poles, cables, controllers, cabinets, communications equipment, electrical connections, or other necessary components, the installation of the equipment, and equipment training for up to two individuals for each emergency service provider listed in Table 4.4-1. Applicants shall work with all appropriate agencies to determine specifications and scheduling for the installation of this system. Applicants shall not be responsible for the ongoing maintenance and operation of the CCTV system after the system is installed and operational.

<b>Community</b>	<b>Facility</b>	<b>Highway/Rail At-Grade Crossings</b>
Mundelein, Illinois	Countryside Fire Protection District - Station No. 1	Allanson Road Diamond Lake Road IL 60 & 83 Gilmer Road
Lake Zurich, Illinois	Lake Zurich Rural Fire Protection District - Station No. 3	Gilmer Road Old McHenry Road Oakwood Road
Barrington, Illinois	Barrington Fire Department - Station No. 1	Lake Zurich Road Northwest Highway (US 14) Hough Street (IL 59) Lake Cook Road/Main Street
Barrington, Illinois	Advocate Good Shepherd Hospital	Lake Zurich Road Northwest Highway (US 14) Hough Street (IL 59) Lake Cook Road/Main Street
Bartlett, Illinois	Bartlett Fire Protection District - Future Station No. 3	Spaulding Road West Bartlett Road Stearns Road
West Chicago, Illinois	West Chicago Fire Protection District Headquarters/Station No. 1	Washington Street Aurora Street Church Street Ann Street
West Chicago, Illinois	West Chicago Fire Protection District - Station No. 3	Washington Street Aurora Street Church Street Ann Street

<b>Table 4.4-1. Emergency Service Providers Receiving CCTV at Affected Highway/Rail At-Grade Crossing Locations</b>		
<b>Community</b>	<b>Facility</b>	<b>Highway/Rail At-Grade Crossings</b>
Plainfield, Illinois	Plainfield Fire Protection District - Station No. 3	111 <sup>th</sup> Street Ferguson Road/119 <sup>th</sup> Street 127 <sup>th</sup> Street
Chicago Heights, Illinois	Saint James Hospital and Health Centers - Chicago Heights	Euclid Avenue Chicago Road West End Avenue/Halsted Street East End Avenue
Schererville, Indiana	Schererville Fire Department Headquarters	Kennedy Avenue Broad Street
Griffith, Indiana	Griffith Volunteer Fire Department Headquarters/Station No. 1	Broad Street East Main Street East Lake Street East Miller Street East Elm Street East 45 <sup>th</sup> Avenue
Griffith, Indiana	Griffith Volunteer Fire Department - Station No. 2	Broad Street East Main Street East Lake Street East Miller Street East Elm Street East 45 <sup>th</sup> Avenue

**4.4.3.3 Airports**

- 22) Applicants shall comply with the four-party Preliminary Memorandum of Understanding (PMOU) announced by the Gary/Chicago International Airport, EJ&E, CSX, and NS on June 27, 2008, regarding the airport’s plan to extend its main runway and to relocate the EJ&E rail line.

**4.4.4 Land Use**

- 23) Applicants shall consult with and comply with the reasonable requirements of INDNR to demonstrate compliance with the Coastal Zone Management Act (CZMA) (16 USC 1451-1456) and the Indiana Lake Michigan Coastal Program in accordance with the guidelines found in the Indiana Natural Resources Commission’s Information Bulletin #43 (Indiana Natural Resources Commission 2007). Applicants shall demonstrate CZMA compliance prior to initiating any project-related construction activities in Indiana.

**4.4.5 Environmental Justice**

- 24) In addition to VM 23, which requires Applicants to provide a copy of their emergency response plan to all appropriate state and local authorities within 6 months of the effective date of the Board’s final decision, Applicants shall provide the appropriate authorities a Spanish-language version of the emergency response plan, upon request.
- 25) In addition to VM 11, all of Applicants’ informational materials concerning railroad safety shall be provided to elementary, middle, and high schools within 0.5 mile of the EJ&E ROW in both English and Spanish, upon request. In addition to VM 65, Applicants shall make materials and information on their project-related website available in both English and Spanish.

- 26) In addition to VM 64, Applicants shall provide a Spanish-language translator to work with the Applicants' community liaison as needed to consult with affected communities and businesses, to attend public meetings, and to conduct public outreach.

#### **4.4.6 Air Quality and Climate**

- 27) Applicants shall comply with EPA emissions standards for diesel-electric railroad locomotives (40 CFR 92) when purchasing and rebuilding locomotives.
- 28) Applicants shall notify local fire departments along the EJ&E rail line at least 4 hours before any open burning activities along the EJ&E rail line ROW and in proposed construction areas and shall obtain oral or written permission from the fire departments prior to such burning activities.

#### **4.4.7 Noise and Vibration**

- 29) Upon request, Applicants shall consult with communities affected by wheel squeal at existing locations on the EJ&E rail line, and cooperate in determining the most appropriate methods for implementing VM 80.
- 30) Applicants shall make reasonable efforts to notify the U.S. Department of Energy Fermi National Accelerator Laboratory (Fermilab) in Batavia, Illinois, of potentially significant operational changes, such as substantial increases in train speed and/or axle loadings that could affect their vibration-sensitive equipment.
- 31) In addition to VM 77 through 83 and Condition 70, Applicants shall include in their quarterly reports documentation of their efforts to implement in a timely manner their voluntary noise and vibration mitigation, which is intended to provide effective and measurable noise reduction in areas that qualify for noise mitigation under IDOT or INDOT criteria, as discussed in Chapter 2 of the Final EIS.

#### **4.4.8 Biological Resources**

##### ***4.4.8.1 Resource Agency Liaison***

- 32) In addition to VM 64, Applicants shall establish a local resource agency liaison(s) with expertise in environmental and natural resource management to work closely with Federal, state, and local natural and water resource agencies (including Fermilab) for the purpose of improved adaptive natural resource management. Applicants shall name their liaison(s) within 1 month of the effective date of the Board's final decision. Applicants' liaison(s) shall ensure that the adaptive management measures developed shall be incorporated into all relevant railroad ROW maintenance contracts. Applicants' liaison(s) shall be available to consult with resource agencies for 5 years following the effective date of the Board's final decision.
- 33) Applicants shall work with relevant natural resource stakeholder groups, forest preserve districts, TNC, INDNR, IDNR and USFWS to establish appropriate monitoring programs. These programs shall include identifying baseline conditions and post-transaction conditions, in areas adjacent to forest preserves and designated natural areas on species of concern to the above groups. Applicants shall fund the monitoring programs for a period of 5 years from the effective date of the Board's decision.

**4.4.8.2 Plant Communities**

- 34) In addition to VM 96 and VM 97, Applicants shall work with the natural resource agencies through the Applicants' resource agency liaison(s) (see Condition 32, above) to define sensitive areas where use of herbicides should be restricted.
- 35) In addition to VM 96, Applicants shall consult with and develop cooperative and adaptive management strategies with natural resource agencies to address invasive species spread directly by transaction-related operations. Applicants' local resource agency liaison(s) (see Condition 32, above) shall serve as coordinator(s).
- 36) Applicants, through the local resource agency liaison (established in Condition 32, above), shall work with the forest preserve districts to minimize disruptions and complications to the management and implementation of district-prescribed burn programs, to the extent possible.

**4.4.8.3 Federally-Listed and State-Listed Threatened and Endangered Species**

- 37) In addition to VM 51, Applicants shall continue to abide by the special conditions of the 1996 USACE Permit #19960211 for train operations on the Paul Ales Branch in order to minimize further effects on the Hines' emerald dragonfly.
- 38) To avoid any direct take of Indiana bats, Applicants shall not remove trees within the former EJ&E ROW with a diameter of 3 or more inches between April 15 and September 15. Applicants shall avoid or minimize tree clearing and snag removal within project-related construction area limits.

**4.4.9 Water Resources**

- 39) Within 6 months of the effective date of the Board's final decision, Applicants shall consult with EPA, Illinois Environmental Protection Agency (IEPA), and Indiana Department of Environmental Management (IDEM) regarding sensitive surface or groundwater resources along the EJ&E rail line and potential cost-effective preventative measures that could be taken to protect such resources from potential contamination in the unlikely event of a hazardous material release from a rail car on the EJ&E rail line. Applicants shall include in their quarterly reports documentation of the outcome of their consultations and shall abide by the consulting agencies' reasonable requirements.
- 40) In addition to VM 90, and in response to concerns raised by INDNR, Applicants shall coordinate project-related wetland mitigation planning with INDNR.
- 41) Applicants shall meet with EPA, USFWS, and USACE during the design of all project-related construction (including the locations of connections and double track) and shall comply with the reasonable requirements of those agencies in order to avoid and minimize, to the extent feasible, effects on wetlands and biological resources.

**4.4.10 Constructions**

**4.4.10.1 Rail Operations**

- 42) In addition to VM 40, Applicants shall maintain access to the pedestrian tunnel from the Metra Park-n-Ride lot to the Metra train station on the east side of the Chicago Subdivision at Matteson, Illinois. Construction of the Applicants' proposed connection shall not interfere with the public's access along Front Street in Matteson. Prior to the proposed construction, Applicants shall consult with Metra to devise reasonable

requirements pertaining to coordinating tunnel access, track construction and existing pedestrian safety.

**4.4.10.2 Rail Safety**

- 43) Applicants shall consult with state Departments of Transportation and other appropriate agencies and shall abide by the reasonable requirements of ICC or INDOT prior to constructing, relocating, upgrading, or modifying highway/rail at-grade crossing warning devices on the EJ&E rail line.

**4.4.10.3 Hazardous Waste Sites**

- 44) Applicants shall use established standards for recycling or reuse of construction materials, such as ballast and rail ties. When recycling construction materials is not a viable operation, the Applicants shall use disposal methods that comply with applicable solid and hazardous waste regulations.
- 45) Applicants shall follow American Society of Testing and Materials (ASTM) E1527-05, Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process, prior to construction activities related to the Proposed Action in areas where potential contamination may be encountered (ASTM 2005). If the Applicants encounter contamination (or signs of potential contamination) during these activities, Applicants shall perform a Phase 2 environmental investigation.

**4.4.10.4 Land Use**

- 46) In addition to VM 70, in response to concerns raised by IDNR, Applicants shall consult with IDNR or INDNR to coordinate a reasonable easement agreement for crossing state-owned parks in Illinois or Indiana, respectively, to reach project-related construction areas.
- 47) In addition to VM 54, VM 60, and VM 62, Applicants shall flag the boundaries of any project-related construction near a forest preserve, nature preserve, protected area, local park, scenic corridor, or land and water reserve and shall coordinate with the respective owners and/or managers and abide by their reasonable requirements.
- 48) Applicants shall store construction-related equipment and materials in established storage areas or on the Applicants' property.
- 49) Prior to construction of double track near Gilmer Road near Hawthorn Woods, Illinois, Applicants shall coordinate with and abide by the reasonable requirements of Hawthorn Woods regarding the Gilmer Road scenic corridor.

**4.4.10.5 Noise and Vibration**

- 50) Applicants shall implement best management practices when developing construction plans and performing transaction-related construction activities to ensure that construction-related noise and vibration effects are minimized to the extent possible.
- 51) Applicants shall design and build all new transaction-related, curved track sections of 3 degrees or above in a manner that minimizes or eliminates the potential for wheel flange squeal using guidance provided by AREMA standards.

**4.4.10.6 Biological Resources**

- 52) Applicants shall immediately cease transaction-related construction in the event that a previously unidentified Federally- or state-listed threatened or endangered species is encountered during transaction-related construction activities. In that event, Applicants shall consult with USFWS for Federally-listed species and IDNR and/or INDNR for state-listed species for guidance on how to minimize transaction-related effects and protect these species, and shall comply with the reasonable solutions suggested by those agencies. Applicants' resource agency liaison(s) (see Condition 32, above) shall serve as coordinator(s).
- 53) In addition to VM 86, Applicants shall not include any invasive weed species in seed mixes for revegetation of areas that would be disturbed during transaction-related construction activities.
- 54) Applicants shall avoid construction of the Munger connection within Pratt's Wayne Woods Forest Preserve, or any other identified migratory bird nesting or breeding area, during the bird breeding season (April through August) to avoid disturbance of breeding birds.
- 55) Prior to transaction-related construction activities, Applicants shall reexamine the Federal and state lists of threatened and endangered species for any newly listed species and shall consult with the appropriate resource agencies on any newly listed species. Applicants' resource agency liaison(s) (see Condition 32, above) shall serve as coordinator(s).
- 56) Applicants shall ensure that all equipment for transaction-related construction activities is washed prior to entering the construction site and after the construction activities are completed. Prior to leaving the construction site, Applicants shall inspect all construction equipment and remove any attached flora, fauna, mud or seeds.
- 57) Applicants shall maintain the current access to Pratt's Wayne Woods near Wayne, Illinois at the Applicants' Proposed Munger Connection in accordance with existing access and management agreements.

**4.4.10.7 Water Resources**

- 58) Applicants shall compensate for effects on isolated wetlands according to the regulations of the State of Indiana for transaction-related construction activities. Isolated wetlands in Indiana are regulated as State Regulated Wetlands (SRWs) under 327 Indiana Administrative Code (IAC) 17.
- 59) For transaction-related construction activities, Applicants shall mitigate for effects on isolated wetlands according to the regulations of Lake and DuPage counties in Illinois, both of which have specific mitigation requirements for effects on isolated waters and their associated buffer areas.
- 60) When performing transaction-related construction activities, Applicants shall not affect existing wetlands in order to create the ponds or stormwater detention that may be required for the management of stormwater runoff.
- 61) Applicants shall comply with the reasonable requirements of the Will County, Illinois Stormwater Management Ordinance for all transaction-related construction activities in Will County.
- 62) When performing transaction-related construction activities, Applicants shall avoid increasing upstream flood elevations in Federal Emergency Management Agency (FEMA)-regulated floodplains and shall obtain a Letter of Map Revision (LOMR) from

FEMA where construction of bridges, culverts, or embankments would result in an unavoidable increase in 100-year flood elevations greater than 0.1 foot.

- 63) Prior to beginning transaction-related construction activities, Applicants shall delineate wetlands and conduct floristic quality assessments in jurisdictional wetland and non-jurisdictional wetland habitat in transaction-related construction areas along the EJ&E rail line (including the six connections and the proposed double track).

#### **4.4.10.8 Cultural Resources**

- 64) During transaction-related construction activities, Applicants shall immediately cease excavation work if archeological resources are encountered during construction activities. Applicants shall inform and consult with the appropriate State Historic Preservation Office and/or appropriate Tribal Historic Preservation Office regarding appropriate measures for addressing the resource, and shall comply with the reasonable requirements those agencies suggest.

#### **4.4.11 Negotiated Agreements**

- 65) Applicants shall comply with the terms of the negotiated agreement that was executed by Joliet, Illinois, and the Applicants on August 25, 2008.
- 66) Applicants shall comply with the terms of the negotiated agreement that was executed by Crest Hill, Illinois, and the Applicants on November 18, 2008.
- 67) If Applicants enter into negotiated agreements with communities or other entities following publication of this Final EIS, Applicants shall submit a copy of the agreement to the Board, and the Board will impose a condition that requires the Applicants to comply with the terms of the agreement. The agreement then would substitute for any site-specific mitigation for that particular community or other entity.

#### **4.4.12 Monitoring and Enforcement**

- 68) If there is a material change in the facts or circumstances upon which the Board relied in imposing specific environmental mitigation conditions, and upon petition by any party who demonstrates such material change, the Board may review the continuing applicability of its final mitigation, if warranted.
- 69) Applicants shall retain a third-party contractor to assist SEA in the monitoring and enforcement of mitigation measures on an as-needed basis until the Applicants have completed transaction-related construction activities, as well as a period covering the first 5 years from the effective date of the Board's final decision, or for any period the Board imposes.
- 70) In addition to VM 101, Applicants shall submit quarterly reports to SEA on the progress of, implementation of, and compliance with these mitigation measures for a period covering 5 years from the effective date of the Board's final decision or for any period the Board imposes.

This page intentionally left blank