Coordination with Local Officials for Undeveloped Lands

For the undeveloped lands along the project, the existing zoning and comprehensive plans of these lands were reviewed to determine the future goals of the lands.

For any undeveloped lands (lands that are not permitted), or agriculture land zoned for development, coordination occurred with local officials, informing them of the predicted noise levels as a result of the proposed project. Appendix B includes letters that were sent to the local officials having jurisdiction over the undeveloped lands, and an exhibit (as an attachment to the letter), depicting where the NAC is approached.

Statement of Likelihood

Based on the traffic noise analysis and noise abatement evaluation conducted, highway traffic noise abatement measures are likely to be implemented based on preliminary design. The noise barriers determined to meet the feasible and reasonable criteria are identified in Table 3-24. If constraints not foreseen in the preliminary design subsequently develop during final design or public input substantially changes reasonableness, the abatement measures may need to be modified or removed from the project plans. A final decision on the installation of abatement measure(s) would be made upon completion of project's final design and the public involvement process.

3.8.3.3 Construction Noise

Trucks and machinery used for construction produce noise that may affect some land uses and activities during the construction period. Residents along the alignment would at some time experience perceptible construction noise from implementation of the project. To minimize or eliminate the effect of construction noise on these receptors, mitigation measures have been incorporated into the IDOT's *Standard Specifications for Road and Bridge Construction* as Article 107.35 (IDOT, 2012).

3.9 Air Quality

3.9.1 Affected Environment

The National Ambient Air Quality Standards (NAAQS), established by USEPA, set maximum allowable concentration limits for six criteria air pollutants. Areas in which air pollution levels persistently exceed the NAAQS may be designated as "nonattainment." States where a nonattainment area is located must develop and implement a state implementation plan (SIP) containing policies and regulations that would bring about attainment of the NAAQS. Areas that had been designated as nonattainment, but have attained the NAAQS for the criteria pollutant(s) associated with the nonattainment designation, would be designated as maintenance areas.

In the greater Chicago area, Cook, DuPage, Kane, Lake, McHenry, and Will Counties, as well as Aux Sable and Goose Lake Townships in Grundy County and Oswego Township in Kendall County, have been designated as nonattainment areas for the 1997 8-hour ozone standard and the 1997 annual $PM_{2.5}$ standard. The Lake Calumet area and Lyons Township in Cook County have been designated as a maintenance area for the PM_{10} standard. The EO-WB project is located within DuPage County and Cook County. The project is not located in the areas of Cook County that are designated maintenance for PM_{10}.

The current NAAQS for the 8-hour ozone standard is 0.075 parts per million (ppm). Ozone attainment is based on the 1997 8-hour NAAQS of 0.08 ppm. On June 11, 2012, USEPA designated the Chicago nonattainment area for the 2008 ozone standard. See http://www.gpo.gov/fdsys/pkg/FR-2012-06-11/pdf/2012-14097.pdf. Conformity for this standard is not required until one year after the effective date of July 20, 2012. Two NAAQS are applied to $PM_{2.5}$, a primary 24-hour standard of 35 micrograms per cubic meter ($\mu g/m^3$) and a primary annual standard of 15 $\mu g/m^3$. IEPA publishes air quality information for the state in its *Annual Air Quality Report*. The latest year for which data are available is 2010. During that year, two air quality monitoring sites were relatively close to the project corridor. No exceedances of the 8-hour ozone NAAQS, the 24-hour primary standard for $PM_{2.5}$ or the primary annual standard for $PM_{2.5}$ were recorded at these locations.

The Air Quality Index (AQI) is the current national standard method for reporting air pollution levels to the general public. The AQI is based on the short-term federal NAAQS, the federal episode criteria, and the Federal Significant Harm levels for five of the "criteria pollutants," namely, ground-level ozone (O_3), sulfur dioxide (SO_2), CO, particulate matter (PM), and nitrogen dioxide (NO_2). The AQI levels have been divided into six categories: Good (0-50), Moderate (51-100), Unhealthy for Sensitive Groups (101-150), Unhealthy (151-200), Very Unhealthy (201-300), and Hazardous (301-500).

The AQI classification of "Unhealthy for Sensitive Groups" occurs on occasion in Illinois under the 8-hour ozone and $PM_{2.5}$ standards. The AQI classifications of Unhealthy are uncommon and classifications of Very Unhealthy are rare in the state. To date, no classifications of Hazardous air quality have occurred in Illinois.

3.9.2 Environmental Consequences

This subsection analyzes the air quality impacts related to the construction and vehicle operations associated with the Build Alternative and No-Build Alternative.

3.9.2.1 COSIM Screening

A pre-screen CO analysis was completed for the proposed project (see Exhibit 3-12 for analysis locations). The results from this proposed roadway improvement indicate that a detailed Carbon Monoxide Screen for Intersection Model (COSIM) air quality analysis is not required because the results for the worst-case receptor are below the 8-hour average NAAQS for CO of 9.0 ppm, which is necessary to protect the public health and welfare.

3.9.2.2 $PM_{2.5}$ Hot-Spot Analysis

Project-level conformity must be established for projects located in a $PM_{2.5}$ nonattainment area. A hot-spot analysis is required in $PM_{2.5}$ and PM_{10} nonattainment or maintenance areas for projects that are determined as project of air quality concern (40 CFR 93.123[b][1]). A $PM_{2.5}$ hot-spot analysis was performed using the latest emission factor model and procedures outlined in the memorandum, "Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas" (USEPA, 2010a) to estimate annual $PM_{2.5}$ concentrations in the project area. A hot-spot analysis is only required for the pollutants and averaging periods for which the area is in nonattainment. In this case, only annual $PM_{2.5}$ was evaluated because the project is located in the DuPage County and Cook County annual $PM_{2.5}$ nonattainment areas.

The USEPA published the Quantitative PM Hot-spot Guidance and announced the approval of USEPA's Motor Vehicle Emission Simulator (MOVES) for hot-spot analyses in the Federal Register notice on December 20, 2010, which also started a two-year conformity grace period to implement the quantitative methodology using MOVES. Air quality analyses that start within the grace period are not required to perform a quantitative analysis, and a qualitative analysis is acceptable. This project was discussed during an interagency consultation meeting on September 10, 2010 (CMAP, 2010a), where it was determined by the group to be a project of air quality concern. In addition, it was determined that in anticipation of the release of final guidance that the $PM_{2.5}$ hot-spot analysis would be completed quantitatively.

Overview of the Analysis

The technical details of the PM hot-spot analysis, Mobile Source Air Toxic (MSAT) analysis, and greenhouse gas emissions estimates are included as Appendix I. The following sections summarize the methodology and results.

The dispersion modeling technique in the project area was USEPA's CAL3QHCR model and emission factors from USEPA's MOVES model. Model inputs were selected according to guidance (USEPA, 2010a). MOVES inputs incorporated local registration mix and fuel data provided by IEPA that are consistent with the regional emissions analyses for conformity determinations in the Transportation Improvement Program (TIP) and SIP. Other CAL3QHCR model inputs include local meteorological data and traffic data specific to each roadway section. Details regarding inputs are included in Appendix I.

The PM hot-spot analyses examine the air quality impacts for the relevant PM NAAQS in the areas substantially affected by the project. Hot-spot analyses typically include the entire project; however, since this project is so expansive, the PM hot-spot analysis focuses on the locations with the highest likelihood of new or worsened PM NAAQS violations. If conformity is demonstrated at these locations, then it will be extrapolated that conformity is met in the entire project area. This is consistent with Section 3.3.2 of the quantitative hot-spot modeling guidance (USEPA, 2010a).

Through consultation with the Illinois Interagency Workgroup on February 25, 2011, four locations were chosen to represent the locations expected to the have the highest air quality concentrations, as a result of high projected traffic volumes and sensitive receptor locations. Interchanges were chosen for analysis because they have the highest traffic volumes concentrated in a given area.

The four locations modeled for the $PM_{2.5}$ hot-spot analysis were:

- Elgin O'Hare and West Bypass corridors
- Elgin O'Hare corridor and I-290
- Elgin O'Hare corridor and Roselle Road
- West Bypass corridor and I-90

It was determined that the concentrations of $PM_{2.5}$ would be evaluated at all four locations for both the Build Alternative and the No-Build Alternative. Section 2.8 of the quantitative hot-spot modeling guidance indicates that if a project is being developed in two stages and the entire two-stage project is being approved, two analysis years should be modeled: one to examine the impacts of the first stage of the project and another to examine the impacts of the completed project (USEPA, 2010a). Because this project is being constructed in two phases, analyses were conducted for 2030 (i.e., after the ICP would be completed), and 2040 (i.e., after construction of the entire project would be completed). The ICP would include improvements for the entire project corridor, but with fewer travel lanes and reduced interchanges. The 2030 interim year represents the year of peak capacity after the ICP would be complete, and it was modeled because it was likely to produce the peak emissions associated with that phase. The PM hot-spot analyses included only directly emitted $PM_{2.5}$ emissions. $PM_{2.5}$ precursors are not considered in PM hot-spot analyses, since precursors take time at the regional level to form into secondary PM. Exhaust, brake wear, and tire wear emissions from on-road vehicles are always included in a project's $PM_{2.5}$. For this analysis, only running exhaust was considered because start exhaust is unlikely to occur on the roadways included in the model domain.

Re-entrained road dust was not included because the SIP does not identify that such emissions are a significant contributor to the $PM_{2.5}$ air quality in the nonattainment area. Emissions from construction-related activities were not included because they are considered temporary, as defined in 40 CFR 93.123(c)(5) (i.e., emissions that occur only during the construction phase and last five years or less at any individual site).

Model output was used to determine a design value, which is a statistic that describes a future air quality concentration in the project that can be compared to a particular NAAQS. The design value was determined by combining modeled $PM_{2.5}$ concentrations from the project and a representative monitored background $PM_{2.5}$ concentration provided by IEPA. Refer to Appendix I for details on how the model results were used to determine the appropriate value to use in the design value.

Background concentrations representing the cumulative $PM_{2.5}$ emissions of other sources in the area were added into the predicted local concentrations for $PM_{2.5}$ emissions at locations where the general public could have extended access. Because of this inclusive analysis methodology, the forecast impacts represent cumulative air quality impacts.

This total concentration was compared to the annual $PM_{2.5}$ NAAQS of 15 $\mu g/m^3$.

Results

The 1997 annual $PM_{2.5}$ design value is currently defined as the average of three consecutive years' annual averages, each estimated using equally-weighted quarterly averages. This NAAQS is met when the three-year average concentration is less than or equal to the 1997 annual $PM_{2.5}$ NAAQS (15.0 $\mu g/m^3$).

The receptor with maximum annual average $PM_{2.5}$ concentration was identified for each model run for each year of meteorological data, and the associated design value was determined for comparison to the NAAQS. The annual $PM_{2.5}$ design value for the receptor with the maximum concentration for each scenario is presented in Table 3-25. $PM_{2.5}$ concentrations ranged from 13.2 $\mu g/m^3$ to 13.8 $\mu g/m^3$ for the 2040 No-Build Alternative and 13.4 $\mu g/m^3$ to 14.0 $\mu g/m^3$ for the 2040 Build Alternative. The annual concentrations of $PM_{2.5}$ for the 2030 interim year ranged from 13.4 $\mu g/m^3$ to 13.8 $\mu g/m^3$.

TABLE 3-25
Annual $PM_{2.5}$ Design Value Concentrations in µg/m^3

Location	2040 Build Alternative	2040 No-Build Alternative	2030 Interim Year
Elgin O'Hare and West Bypass corridors	14.0	13.2	13.8
Elgin O'Hare corridor and I-290	13.5	13.8	13.6
Elgin O'Hare corridor and Roselle Road	13.4	13.4	13.4
West Bypass corridor and I-90	13.6	13.8	13.8

Notes: All concentrations include background concentration of 13 µg/m^3; Annual $PM_{2.5}$ NAAQS is 15 µg/m^3; µg/m^3 = micrograms per cubic meter. Concentrations are for the receptor with highest concentration for each scenario.

The results of the analysis show that the modeled localized $PM_{2.5}$ concentrations do not exceed the annual $PM_{2.5}$ NAAQS for the Build Alternative, No-Build Alternative, or 2030 interim year of the Build Alternative.

The local hot-spot analysis demonstrates that the project would not:

- Cause or contribute to a new violation of any air quality standards in any area.
- Increase the severity or frequency of an existing violation of any standard in any area.
- Delay timely attainment of any standard, required interim emission reductions, or milestones in any area.

On March 13, 2012, the Illinois Interagency Workgroup agreed on the $PM_{2.5}$ Hot-Spot Analysis conducted for this project (CMAP, 2012).

3.9.2.3 Mobile Source Air Toxics Analysis

In addition to the criteria air pollutants for which there are NAAQS, USEPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

MSATs are a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The USEPA is the lead federal agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments of 1990. With these amendments, Congress mandated that USEPA regulate 188 air toxics, also known as hazardous air pollutants.

The USEPA has assessed this expansive list in its *Control of Hazardous Air Pollutants from Mobile Sources; Final Rule* (USEPA, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in its Integrated Risk Information System database (USEPA, 2010b).

In addition, USEPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from its 1999 National Air Toxics Assessment (NATA) (USEPA, 1999). These compounds are:

- Acrolein
- Benzene
- 1,3-butadiene
- Diesel particulate matter plus diesel exhaust organic gases (diesel PM)
- Formaldehyde
- Naphthalene
- Polycyclic organic matter (POM)

Although FHWA considers these the priority MSATs, the list is subject to change and may be adjusted in consideration of future USEPA rules.

Impact Analysis

The FHWA, *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA* suggests a three-tiered approach to analyzing the effects of a transportation project in terms of public exposure to MSAT emissions (FHWA, 2009).

The level of analysis is related to the expected size and effect of the project, as follows:

- No analysis for projects with no potential for meaningful MSAT effects.
- Qualitative analysis for projects with low potential MSAT effects.
- Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

The EO-WB project exceeds the annual ADT volume to warrant a quantitative MSAT analysis; therefore, total project emissions were estimated for the 2010 existing timeframe and Build Alternative and the No-Build Alternative.

Daily emissions were estimated for each priority MSAT using the MOVES emission factor model. The estimates used ADT volumes and average speeds for access-controlled facility, primary arterials, and minor arterials in the project area.

With the Build Alternative and No-Build Alternative, there are localized areas where VMT would increase, and other areas where VMT would decrease. Therefore, it is possible that localized increases and decreases in MSAT emissions may occur. The MSAT emissions for the project area are presented in Table 3-26. Emissions increase as a result of the project as compared to the No-Build Alternative by about 14 percent for each pollutant. However, this is a reduction of approximately 80 percent as compared to the existing MSAT emissions. This is consistent with USEPA's projections that national control programs will reduce annual MSAT emissions by 72 percent between 1999 and 2050.

TABLE 3-26
Daily Project Area MSAT Emissions in Pounds per Day

Pollutant	2010 Existing Condition	2040 Build Alternative	2040 No-Build Alternative
Benzene	50.9	13.4	11.8
Acrolein	3.7	0.6	0.5
1,3-Butadiene	12.2	2.8	2.4
Diesel PM [a]	685.9	31.9	27.8
Formaldehyde	75.8	9.6	8.4
Naphthalene	23.2	19.4	16.8
POM [b]	NA	NA	NA

Notes: NA=Not Applicable

[a] PM_{10} emissions from diesel running exhaust and crankcase exhaust.
[b] POM emissions are not calculated by MOVES, but the trend would be similar to that for naphthalene.

3.9.2.4 Greenhouse Gas Emissions

Vehicles are a major source of Greenhouse Gas (GHG) emissions and contribute to global warming primarily through the burning of gasoline and diesel fuels. National estimates show that the transportation sector (including on-road vehicles, construction activities, airplanes, and boats) accounts for almost 30 percent of total domestic carbon dioxide (CO_2) emissions.

Climate change is an important national and global concern. While the earth has gone through many natural changes in climate in its history, there is general agreement that the earth's climate is currently changing at an accelerated rate and will continue to do so in the foreseeable future. Anthropogenic (human-caused) GHG emissions contribute to this rapid change. CO_2 makes up the largest component of these GHG emissions. Other prominent transportation GHGs include methane (CH_4) and nitrous oxide (N_2O).

Many GHGs occur naturally. Water vapor is the most abundant GHG and makes up approximately two-thirds of the natural greenhouse effect. However, the burning of fossil fuels and other human activities are adding to the concentration of GHGs in the atmosphere. Many GHGs remain in the atmosphere for time periods ranging from decades to centuries. GHGs trap heat in the earth's atmosphere. Because the atmospheric concentration of GHGs continues to climb, our planet will continue to experience climate-related phenomena. For example, warmer global temperatures can cause changes in precipitation and sea levels.

To date, no national standards have been established regarding GHGs, nor has USEPA established criteria or thresholds for ambient GHG emissions pursuant to its authority to establish motor vehicle emission standards for CO_2 under the Clean Air Act. However, there is a considerable body of scientific literature addressing the sources of GHG emissions and their adverse effects on climate, including reports from the Intergovernmental Panel on Climate Change, the U.S. National Academy of Sciences, and USEPA and other Federal agencies. GHGs are different from other air pollutants evaluated in Federal environmental reviews because their impacts are not localized or regional due to their rapid dispersion into the global atmosphere, which is characteristic of these gases. The affected environment for CO_2 and other GHG emissions is the entire planet. In addition, from a quantitative perspective, global climate change is the cumulative result of numerous and varied emissions sources (in terms of both absolute numbers and types), each of which makes a relatively small addition to global atmospheric GHG concentrations. In contrast to broad scale actions such as actions involving an entire industry sector or very large geographic areas, it is difficult to isolate and understand the GHG emissions impacts for a particular transportation project. Furthermore, there is presently no scientific methodology for attributing specific climatological changes to a particular transportation project's emissions.

Under NEPA, detailed environmental analysis should be focused on issues that are significant and meaningful to decisionmaking.[7] Based on the nature of GHG emissions and the exceedingly small potential GHG impacts of the proposed action, as discussed below and shown in Table 3-27, the GHG emissions from the proposed action will not result in "reasonably foreseeable significant adverse impacts on the human environment" (40 CFR 1502.22[b]).

The context in which the emissions from the proposed project will occur, together with the expected GHG emissions contribution from the project, illustrate why the project's GHG emissions will not be significant and will not be a substantial factor in the decisionmaking. The transportation sector is the second largest source of total GHG emissions in the United States, behind electricity generation. The transportation sector was responsible for approximately 27 percent of all anthropogenic (human-caused) GHG emissions in the United States in 2009.[8] The majority of transportation GHG emissions are the result of fossil fuel combustion. CO_2 makes up the largest component of these GHG emissions. United States CO_2 emissions from the consumption of energy accounted for about 18 percent of worldwide energy consumption CO_2 emissions in 2009.[9] United States transportation CO_2 emissions accounted for about six percent of worldwide CO_2 emissions.[10]

While the contribution of GHGs from transportation in the United States, as a whole, is a large component of United States' GHG emissions, as the scale of analysis is reduced the GHG contributions become quite small. Table 3-27 presents the relationship between current and projected Illinois highway GHG emissions and total global GHG emissions, as well as information on the scale of the project relative to statewide travel activity. The emissions in Table 3-27 are presented as carbon dioxide equivalent (CO_2e) emissions, which take into account the global warming potential of chemical emissions from a source. The combustion of fossil fuels emits small amounts of N_2O and CH_4. The global warming potential of N_2O and CH_4 are 310 and 21 times that of CO_2, respectively.

The potential CO_2e emissions due to the project were estimated using the MOVES emission factor model. The estimates used ADT volumes and average speeds for access-controlled

7 See 40 CFR 1500.1(b), 1500.2(b), 1500.4(g), and 1501.7

8 Calculated from data in U.S. Environmental Protection Agency, Inventory of Greenhouse Gas Emissions and Sinks, 1990-2009.

9 Calculated from data in U.S. Energy Information Administration International Energy Statistics, Total Carbon Dioxide Emissions from the Consumption of Energy, http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=90&pid=44&aid=8, accessed 9/12/11.

10 Calculated from data in EIA figure 104: http://205.254.135.24/oiaf/ieo/graphic_data_emissions.html and USEPA table ES-3: http://epa.gov/climatechange/emissions/downloads11/US-GHG-Inventory-2011-Executive-Summary.pdf.

highways, primary arterials, and secondary arterials in the project area. The results were multiplied by 365 to present the GHG emissions in terms of million metric tons of CO_2e ($MMTCO_2e$) per year (see Table 3-27). The annual CO_2e emissions due to the project were compared to projected global emissions and projected emissions from the entire State of Illinois.

TABLE 3-27
Annual Project GHG Emissions in Million Metric Tons CO_2 Equivalent per Year

Pollutant	Global CO_2e[a]	Illinois CO_2e[b]	Illinois % of Global Total	Project CO_2e[c]
Existing Conditions (2010)	31,305	60.8	0.19%	0.92
Future Projections (2040)	46,103	84.0	0.18%	0.96

[a] Global emissions from EIA's International Energy Outlook 2011. The 2040 emissions were estimated by applying 1.3 percent growth rate to 2035 emissions.
[b] Illinois emissions from MOVES using Illinois defaults.
[c] Project emissions from MOVES using project volume and speed data.

Based on emissions estimates from MOVES, and global CO_2e estimates and projections from the Energy Information Administration, CO_2e emissions from motor vehicles in the entire state of Illinois contributed less than one percent of global emissions in 2010 (0.19 percent), and are projected to contribute an even smaller fraction (0.18 percent) in 2040. Illinois emissions represent a smaller share of global emissions in 2040 because global emissions increase at a faster rate. Based on modeled project CO_2e emissions, the proposed project could result in a potential increase in global CO_2 emissions in 2040 (0.0021 percent), and a corresponding increase in Illinois's share of global emissions in 2040 (1.14 percent). This very small change in global emissions is well within the range of uncertainty associated with future emissions estimates.[11, 12]

3.9.2.5 Construction-Related Particulate Matter Emissions

Demolition and construction activities can result in short-term increases in fugitive dust and equipment-related particulate emissions in and around the project area. (Equipment-related particulate emissions can be minimized if the equipment is well-maintained.) The potential air quality impacts would be short-term, occurring only while demolition and construction work is in progress and local weather conditions are appropriate. According to 40 CFR 93.123(c)(5), construction emissions were not required to be included in the PM hot-spot analysis because they would not last more than five years at any one site.

[11] For example, Figure 114 of the Energy Information Administration's *International Energy Outlook 2010* shows that future emissions projections can vary by almost 20 percent, depending on which scenario for future economic growth proves to be most accurate.

[12] When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an Environmental Impact Statement, and there is incomplete or unavailable information, the agency is required make clear that such information is lacking (40 CFR 1502.22). The methodologies for forecasting GHG emissions from transportation projects continue to evolve, and the data provided should be considered in light of the constraints affecting the currently available methodologies. As previously stated, tools such as USEPA's MOVES model can be used to estimate vehicle exhaust emissions of CO_2 and other GHGs. However, only rudimentary information is available regarding the GHG emissions impacts of highway construction and maintenance. Estimation of GHG emissions from vehicle exhaust is subject to the same types of uncertainty affecting other types of air quality analysis, including imprecise information about current and future estimates of vehicle miles traveled, vehicle travel speeds, and the effectiveness of vehicle emissions control technology. Finally, there is presently no scientific methodology that can identify causal connections between individual source emissions and specific climate impacts at a particular location.

The potential for fugitive dust emissions typically is associated with building demolition, ground clearing, site preparation, grading, stockpiling of materials, onsite movement of equipment, and transportation of materials. The potential is greatest during dry periods, periods of intense construction activity, and during high-wind conditions.

3.9.2.6 Conformity Analysis/Statement

The EO-WB project is located within DuPage County and Cook County, both of which are nonattainment for the 1997 8-hour ozone and 1997 annual $PM_{2.5}$ standards. The project is not located in the areas of Cook County that are designated maintenance for PM_{10}. Since this project is located in nonattainment areas for transportation-related criteria pollutants, the transportation conformity requirements of the Clean Air Act apply.

In 2010, the entire EO-WB project was included in the fiscally-constrained and conformed part of the *GO TO 2040 Comprehensive Regional Plan* (CMAP, 2010b).

Some aspects of the EO-WB project are included in the *Federal Fiscal Year 2010-2015 Transportation Improvement Program (TIP)* (CMAP, 2010c) endorsed by the MPO Policy Committee of the CMAP for the region in which the proposed project is located (the TIP number for this project is 03-96-0021). The specific elements of the project that are contained in the current TIP include Phase I and Phase II engineering and right-of-way acquisition for improvements to extend the Elgin-O'Hare Expressway east from Rohlwing Road to the new O'Hare West Bypass (see page 28 of the *Federal Fiscal Year 2010-2015 Transportation Improvement Program [TIP]* [CMAP, 2010c]). Further, the *FY 2010-2015 Proposed Highway Improvement Program* (IDOT, 2010) has several entries referencing the EO-WB project including:

- Phase I and Phase II engineering for improvements to the Elgin-O'Hare Expressway extending from IL 53 to the new O'Hare West Bypass, and the new West Bypass from I-90 to I-294.
- Land acquisition for improvements to the Elgin-O'Hare Expressway extending from IL 53 to the new O'Hare West Bypass.
- New construction of portions of the Elgin-O'Hare Expressway extending from IL 53 to the West Bypass, and the new West Bypass from I-90 to I-294.

Whereas, the project area is defined as nonattainment, the FHWA must make certain that the project is conformed as part of *GO TO 2040 Comprehensive Regional Plan*, contained within the fiscally-constrained portion of the long-range plan, and referenced in the TIP as appropriate for 2010-2015 prior to the signing of the ROD.

On March 8, 2012, the FHWA and the Federal Transit Administration (FTA) determined that the *GO TO 2040 Comprehensive Regional Plan* and the TIP conform to the SIP and the transportation-related requirements of the 1990 Clean Air Act Amendments. These findings were in accordance with 40 CFR Part 93, "Determining Conformity of Federal Actions to State or Federal Implementation Plans."

A quantitative $PM_{2.5}$ hot-spot analysis was performed for this project, and it was determined that the project would not cause, contribute to, or delay timely attainment of the annual $PM_{2.5}$ NAAQS.

The EO-WB project's design concept and scope are consistent with the project information used for the regional conformity analysis. Therefore, this project conforms to the transportation-related requirements of the 1990 Clean Air Act Amendments for the 1997 8-hour ozone standard and 1997 $PM_{2.5}$ standard.

3.9.3 Measures to Minimize Harm and Mitigation

IDOT's *Standard Specifications for Road and Bridge Construction* (IDOT, 2012) and the Illinois Tollway Supplemental Specification include provisions on dust control. Under these provisions, dust and airborne dirt generated by IDOT construction-related activities would be controlled through dust control procedures or a specific dust control plan, when warranted. The contractor would meet with the Illinois Tollway/IDOT to review the nature and extent of dust-generating activities and would cooperatively develop specific types of control techniques appropriate to the specific situation (Dust Control Plan). Techniques that may warrant consideration include measures such as minimizing track-out of soil onto nearby publicly-traveled roads, reducing speed on unpaved roads, covering haul vehicles, and applying chemical dust suppressants or water to exposed surfaces, particularly those on which construction vehicles travel. With the application of appropriate measures to limit dust emissions during construction, the EO-WB project would not cause any major, short-term PM air quality impacts.

Both IDOT and the Illinois Tollway have Special Provisions to reduce diesel exhaust air pollution from construction activities. These Special Provisions include: Ultra Low Sulfur Diesel Fuel, idling restrictions, and the use of diesel retrofits on older diesel construction equipment. These provisions will be applied during construction as referenced in subsection 3.21.3.

The Illinois Tollway specifies that construction equipment shall reduce air emissions with the use of retrofit emission control devices, and/or the use of cleaner burning diesel fuels for equipment greater than 50 horsepower. The retrofit device shall be technology included on USEPA's verified retrofit technology list, or certified by the manufacturer. Air emissions are also reduced with idling restrictions. Diesel powered equipment will not be allowed to idle except for short periods (five minutes) when loading or unloading, when forced to remain motionless in traffic, when necessary to use auxiliary equipment, and when equipment is being repaired.

The contractor will designate a point person to coordinate with the Illinois Tollway on matters of air quality. If adverse air quality conditions arise an appropriate course of action will be determined by the Illinois Tollway and the contractor.

The Chicago Climate Action Plan was developed by a multi-stakeholder task force to evaluate local sources of GHG emissions and set goals to reduce those emissions. Improved transportation options include enhancing transit developments; promoting other alternative forms of commuting such as walking, biking, and ride sharing; and developing communities around public transportation hubs. The Chicago Climate Action Plan estimates a potential reduction of 3.61 $MMTCO_2e$ from improved transportation options.