**NCDOT Project-Level Air Quality Assessment**

***Template Report for Qualitative NEPA/SEPA Documentation***

***(Based on the NCDOT Air Quality Handbook version 2.0, August 2020)***

***Version 1.5***

**Revised April 2024**

***Guide to Template Usage:***

This template is intended for use in SEPA or NEPA EA/EIS-level documents for which a quantitative air quality analysis is not required. This template is not required for use for CE-level documents. Please refer to the NCDOT Air Quality Handbook for more information on determining the level of qualitative or quantitative analysis required for your project.

***Guide to Color Coding***:

Red Text = Text to be replaced with project-specific text

*Blue Italicized Text = guidance or explanatory information that should be deleted from the report*

Black Text = Standard text that generally will not need to be modified for each project.

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**AIR QUALITY REPORT**

Project Description (e.g., Improvement Type and Route, From XXXXX

To XXXXXXX)

XXXX County

WBS Element No. XXXXXX

TIP Project No. XXXXXX

Prepared for:

North Carolina Department of Transportation

Environmental Analysis Unit

Traffic Noise and Air Quality Group

Prepared by:

Company Name

City, State Zip

Date

Project Description

XXXX County

WBS Element No. XXXXXX

TIP Project No. XXXXXX

Prepared for:

North Carolina Department of Transportation

Environmental Analysis Unit

Traffic Noise and Air Quality Group

Name

Company

Title

Accepted By:

NCDOT Environmental Analysis Unit Date Traffic Noise & Air Quality Group

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# 1.0 Introduction

*The introduction should include a brief synopsis of the project and pertinent history / information about the project area. This section should include the purpose and need of the project and reference an attached map showing the project location. This language may be pulled from other NEPA documentation associated with the project or be developed using the format below. The purpose and need should describe the improvements being proposed and also highlight the primary reasons for advancing the project.*

The North Carolina Department of Transportation (NCDOT) proposes to type of improvement on Route (road name) from Route (road name) to Route (road name) in County (county name(s)).See Figure 1 for Vicinity Map. The purpose and need of the project is \_\_\_\_\_\_\_\_\_\_.

# 2.0 Methodology

*The methodology should include a length and any alternatives (including the no-build alternative) for the project. This section should also include a discussion on the air quality approach, pertinent guidance, and any assumptions used for the assessment.*

The project is included in the North Carolina Department of Transportation’s 20XX-20XX State Transportation Improvement Program (STIP) as Project X-XXXX. The length of the project is XXX miles. The project is located in the \_\_\_\_\_\_\_ Metropolitan Planning Organization/\_\_\_\_\_\_\_\_ Rural Planning Organization. *For projects that are contained within an MPO boundary, list the corresponding MTP project and its corresponding financially constrained project year.* An EA/EIS SEPA/NEPA level assessment is being prepared for the proposed project. *If the project has alternatives, provide a description of those alternatives here and refer to Figure 2.*

Per NCDOT guidance, the following traffic scenarios were considered as a part of this study:

* Design Year (XXXX) No-Build
* Design Year (XXXX) Build

Based on the characteristics of this project, it is/is not considered an exempt project or a project of no meaningful potential MSAT effects. As a result, the air quality assessment includes/does not include a qualitative mobile source air toxics (MSAT) analysis.

*Consult Section 5.5 of this template for language clarifying the need for a qualitative MSAT analysis for NEPA/SEPA EA and EIS documents. For NEPA projects with a design year AADT of 140,000 or more, a quantitative analysis will likely be needed, and FHWA should be consulted for additional guidance. For SEPA projects with a design year AADT of 140,000 or more, the Traffic Noise and Air Quality Group should be consulted for additional guidance. Section 5.2 of the NCDOT Air Quality Handbook provides additional guidance on MSAT analyses.*

# 3.0 EPA National Ambient Air Quality Standards

Air pollution originates from various sources. Emissions from industry and internal combustion engines are the most prevalent sources. The impact resulting from highway construction ranges from intensifying existing air pollution problems to improving the ambient air quality. Changing traffic patterns are a primary concern when determining the impact of a new highway facility or the improvement of an existing highway facility.

The Federal Clean Air Act of 1970 established the National Ambient Air Quality Standards (NAAQS). These were established in order to protect public health, safety, and welfare from known or anticipated effects of air pollutants. The NAAQS contain criteria for SO2, particulate matter (PM10, 10-micron and smaller; PM2.5, 2.5- micron and smaller), CO, nitrogen dioxide (NO2), ozone (O3), and lead (Pb). The National Ambient Air Quality Standards are presented in Table 1.

The primary pollutants from motor vehicles are unburned hydrocarbons (HC), nitrogen oxides (NOx), CO, and particulates. HC and NOx can combine in a complex series of reactions catalyzed by sunlight to produce photochemical oxidants such as O3 and NO2. Because these reactions take place over a period of several hours, maximum concentrations of photochemical oxidants are often found far downwind of the precursor sources.

*This section includes the table found at* [*https://www.epa.gov/criteria-air-pollutants/naaqs-table*](https://www.epa.gov/criteria-air-pollutants/naaqs-table)*, which should be verified as current at the time of documentation. Guidance on this language is included within sections 1.3.1 and 1.3.2 of the NCDOT Air Quality Handbook.*

Table 1. EPA National Ambient Air Quality Standards

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Pollutant** | **Primary/Secondary** | **Averaging Time** | **Level** | **Form** |
| [Carbon Monoxide (CO)](https://www.epa.gov/co-pollution/table-historical-carbon-monoxide-co-national-ambient-air-quality-standards-naaqs) | Primary | 8 hours | 9 ppm | Not to be exceeded more than once per year |
| 1 hour | 35 ppm |
| [Lead (Pb)](https://www.epa.gov/lead-air-pollution/table-historical-lead-pb-national-ambient-air-quality-standards-naaqs) | primary andsecondary | Rolling 3 month average | 0.15 μg/m3 [(1)](https://www.epa.gov/criteria-air-pollutants/naaqs-table#1) | Not to be exceeded |
| [Nitrogen Dioxide (NO2)](https://www.epa.gov/no2-pollution/table-historical-nitrogen-dioxide-national-ambient-air-quality-standards-naaqs) | Primary | 1 hour | 100 ppb | 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years |
| primary andsecondary | 1 year | 53 ppb [(2)](https://www.epa.gov/criteria-air-pollutants/naaqs-table#2) | Annual Mean |
| [Ozone (O3)](https://www.epa.gov/ozone-pollution/table-historical-ozone-national-ambient-air-quality-standards-naaqs) | primary andsecondary | 8 hours | 0.070 ppm [(3)](https://www.epa.gov/criteria-air-pollutants/naaqs-table#3) | Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years |
| [Particle Pollution (PM)](https://www.epa.gov/pm-pollution/table-historical-particulate-matter-pm-national-ambient-air-quality-standards-naaqs) | PM2.5 | Primary | 1 year | 9.0 μg/m3 | Annual mean, averaged over 3 years |
| secondary | 1 year | 15.0 μg/m3 | Annual mean, averaged over 3 years |
| primary andsecondary | 24 hours | 35 μg/m3 | 98th percentile, averaged over 3 years |
| PM10 | primary andsecondary | 24 hours | 150 μg/m3 | Not to be exceeded more than once per year on average over 3 years |
| [Sulfur Dioxide (SO2)](https://www.epa.gov/so2-pollution/table-historical-sulfur-dioxide-national-ambient-air-quality-standards-naaqs) | Primary | 1 hour | 75 ppb [(4)](https://www.epa.gov/criteria-air-pollutants/naaqs-table#4) | 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years |
| secondary | 3 hours | 0.5 ppm | Not to be exceeded more than once per year |
| (1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m3 as a calendar quarter average) also remain in effect.(2) The level of the annual NO2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.(4) The previous SO2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which implementation plans providing for attainment of the current (2010) standard have not been submitted and approved and which is designated nonattainment under the previous SO2 standards or is not meeting the requirements of a SIP call under the previous SO2 standards (40 CFR 50.4(3)), A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the require NAAQS. |
| Source: US EPA, <https://www.epa.gov/criteria-air-pollutants/naaqs-table>, accessed Insert date table was accessed. |

# 4.0 Attainment Status

*For counties in non-attainment or maintenance, contact the Traffic Noise and Air Quality Group for location-specific information to be included here. For counties that are in attainment, use the following language.*

The project is located in (county name) County, which has been determined to comply with the National Ambient Air Quality Standards. The proposed project is located in an attainment area; therefore, 40 CFR Parts 51 and 93 are not applicable. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

## 4.1 Carbon Monoxide

Carbon monoxide is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes approximately 56 percent of all carbon emissions nationally. State and federal guidance suggests using CO predictions as the primary indicator for vehicular-induced pollution. CO is sensitive to variations in temperature; emissions are twice as high in winter months as compared to summer months. CO is also sensitive to vehicle speed; emissions decrease with an increase in speed (up to 50 mph), and then increase again at higher speeds. Idling and low speeds (less than 15 mph) can produce the highest CO levels. Recent trends in air quality indicate CO levels have dramatically improved. The decline in CO concentrations is primarily due to stricter controls on automobile exhaust resulting in cleaner cars. This drop is remarkable because it is occurring while the nation’s population is growing rapidly yielding more traffic and urban sprawl.

## 4.2 Ozone & Oxides

Ozone (i.e., a gaseous component of ground‐level photochemical smog) results from a chemical reaction between volatile organic compounds and oxides of nitrogen in the presence of sunlight. Also, the concentration and dispersion of ozone are significantly affected by an area’s meteorology and topography. Because it is primarily an area‐wide pollutant, it is typically assessed in system‐level planning as part of the air quality State Implementation Plan (SIP) development and conformity process. Through the Transportation Improvement Program (TIP)/SIP evaluation process, this pollutant is evaluated on a regional level, but is not evaluated at the project‐level.

Nitrogen oxides are a group of highly reactive gases. One of these gases, nitrogen dioxide, along with particles in the air, is often seen as a reddish‐brown layer over urban areas. The primary source of nitrogen oxides are motor vehicles, electric utilities, and industrial, commercial, and residential sources that burn fuel.

Motor vehicles emit approximately 49 percent of the nation’s level of nitrogen oxides. Nitrogen dioxide (along with other oxides of nitrogen) is considered an ozone precursor and is evaluated as part of the regional conformity requirements during the project planning phases. Therefore, nitrogen dioxide is not considered in project‐level analyses.

## 4.3 Particulate Matter & Sulfur

Particle pollution is a term used to describe particles in the air including dust, dirt, soot, smoke, and liquid droplets. Sources that directly emit particle pollution include motor vehicles, construction activities, and unpaved roads. Sources of particles that form in the air from chemical processes involving sunlight and water vapor include fuel combustion in motor vehicles, at power plants, and in industrial processes. Particle pollution is of increased interest because diesel vehicles emit significant levels of the pollutant and diesel particulate has been identified as a probable carcinogen by the EPA.

PM10 is used as a measure of “coarse” particulate, in which the particles are 10 microns or less in size. Coarse particles of this size are typically formed by earth-based materials such as brake or tire wear. PM2.5 is used as a measure of “fine” particulate, in which the particles are 2.5 microns or less in size. Fine particles of this size are typically formed as a product of combustion. There are three counties (Catawba, Davidson, and Guilford) that were identified for the 1997 PM2.5 as maintenance in North Carolina. The 1997 Primary Annual PM- 2.5 NAAQS (level of 15 µg/m3) has been revoked in attainment and maintenance areas for the NAAQS, effective October 24, 2016. Therefore, no hot spot analysis is required in North Carolina for PM2.5.

On‐road motor vehicles are not considered to be a significant source of sulfur dioxide. Sulfur dioxide is not a pollutant of concern for project‐level analyses.

## 4.4 Lead

Lead is a metal found naturally in the environment. The major sources of lead emissions were historically motor vehicles. However, due to a phase-out of leaded gasoline beginning in the 1970s, metal processing is currently the major source of lead emissions. Lead is not a pollutant of concern for on-road transportation projects.

# 5.0 Mobile Source Air Toxics (MSAT)

## 5.1 Background

*Content is drawn from the January 18, 2023 FHWA “Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents,” Background Section* *(*[*https://www.fhwa.dot.gov/environMent/air\_quality/air\_toxics/policy\_and\_guidance/msat/*](https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat/)*).*

FHWA issued its [Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents](https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/index.cfm) in January 2023. Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA assessed this expansive list in its rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are part of EPA’s [Integrated Risk Information System (IRIS)](https://www.epa.gov/iris). In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-cancer hazard contributors from the 2014 [National Air Toxics Assessment (NATA)](https://www.epa.gov/national-air-toxics-assessment). These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules.

## 5.2 Motor Vehicle Emissions Simulator (MOVES)

*Content and figure is drawn from the January 18, 2023 FHWA “Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents,” Motor Vehicle Emissions Simulator Section* *(*[*https://www.fhwa.dot.gov/environMent/air\_quality/air\_toxics/policy\_and\_guidance/msat/*](https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat/)*).*

According to EPA, MOVES3 is a major revision to MOVES2014 and improves upon it in many respects. MOVES3 includes new data, new emissions standards, and new functional improvements and features. It incorporates substantial new data for emissions, fleet, and activity developed since the release of MOVES2014. These new emissions data are for light- and heavy- duty vehicles, exhaust and evaporative emissions, and fuel effects. MOVES3 also adds updated vehicle sales, population, age distribution, and vehicle miles travelled (VMT) data. In the November 2020 EPA issued [MOVES3 Mobile Source Emissions Model Questions and Answers](https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010M06.pdf) EPA states that for on-road emissions, MOVES3 updated heavy-duty (HD) diesel and compressed natural gas (CNG) emission running rates and updated HD gasoline emission rates. They updated light-duty (LD) emission rates for hydrocarbon (HC), carbon monoxide (CO) and nitrogen oxide (NOx) and updated light-duty (LD) particulate matter rates, incorporating new data on Gasoline Direct Injection (GDI) vehicles.

Using EPA’s MOVES3 model, as shown in Figure 1, FHWA estimates that even if VMT increases by 31 percent from 2020 to 2060 as forecast, a combined reduction of 76 percent in the total annual emissions for the priority MSAT is projected for the same time period.



Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors.

Source: EPA MOVES3 model runs conducted by FHWA, March 2021.

Inset: FHWA Projected National MSAT Emission Trends 2020-2060 For Vehicles Operating on Roadways

Diesel PM is the dominant component of MSAT emissions, making up 36 to 56 percent of all priority MSAT pollutants by mass, depending on calendar year. Users of MOVES3 will notice some differences in emissions compared with MOVES2014. MOVES3 is based on updated data on some emissions and pollutant processes compared to MOVES2014, and also reflects the latest Federal emissions standards in place at the time of its release. In addition, MOVES3 emissions forecasts are based on slightly higher VMT projections than MOVES2014, consistent with nationwide VMT trends.

## 5.3 MSAT Research

*Content is drawn from the January 18, 2023 FHWA “Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents,” MSAT Research Section (*[*https://www.fhwa.dot.gov/environMent/air\_quality/air\_toxics/policy\_and\_guidance/msat/*](https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat/)*).*

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how potential public health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA.

Nonetheless, air toxics concerns continue to arise on highway projects during the NEPA process. Even as the science emerges, the public and other agencies expect FHWA to address MSAT impacts in its environmental documents. The FHWA, EPA, the Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this field.

## 5.4 NEPA Context

*Content is drawn from the January 18, 2023 FHWA “Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents,” NEPA Context Section (*[*https://www.fhwa.dot.gov/environMent/air\_quality/air\_toxics/policy\_and\_guidance/msat/*](https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat/)*).*

The NEPA requires, to the fullest extent possible, that the policies, regulations, and laws of the Federal Government be interpreted and administered in accordance with its environmental protection goals, and that Federal agencies use an interdisciplinary approach in planning and decision-making for any action that adversely impacts the environment (42 U.S.C. 4332). In addition to evaluating the potential environmental effects, FHWA must also take into account the need for safe and efficient transportation in reaching a decision that is in the best overall public interest (23 U.S.C. 109(h)). The FHWA policies and procedures for implementing NEPA are contained in 23 USC 139 and 23 CFR Part 771.

## 5.5 Consideration of MSAT in NEPA Documents

*Content is drawn from the January 18, 2023 FHWA “Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents,” Consideration of MSAT in NEPA Documents Section (*[*https://www.fhwa.dot.gov/environMent/air\_quality/air\_toxics/policy\_and\_guidance/msat/*](https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat/)*).*

The FHWA developed a tiered approach with three categories for analyzing MSAT in NEPA documents, depending on specific project circumstances:

1. No analysis for projects with no potential for meaningful MSAT effects;
2. Qualitative analysis for projects with low potential MSAT effects; or
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

For projects warranting MSAT analysis, all nine priority MSAT should be considered.

(1) Projects with No Meaningful Potential MSAT Effects, or Exempt Projects.

The types of projects included in this category are:

* Projects qualifying as a categorical exclusion under 23 CFR 771.117;
* Projects exempt under the Clean Air Act conformity rule under 40 CFR 93.126; and
* Other projects with no meaningful impacts on traffic volumes or vehicle mix.

For projects that are categorically excluded under 23 CFR 771.117, or are exempt from conformity requirements under the Clean Air Act pursuant to 40 CFR 93.126, no analysis or discussion of MSAT is necessary. Documentation sufficient to demonstrate that the project qualifies as a categorical exclusion and/or exempt project will suffice. For other projects with no or negligible traffic impacts, regardless of the class of NEPA environmental document, no MSAT analysis is recommended. However, the project record should document in the EA or EIS the basis for the determination of no meaningful potential impacts with a brief description of the factors considered.

(2) Projects with Low Potential MSAT Effects

The types of projects included in this category are those that serve to improve operations of highway, transit, or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase MSAT emissions. This category covers a broad range of projects.

FHWA anticipates that most highway projects that need an MSAT assessment will fall into this category. Examples of these types of projects are minor widening projects; new interchanges; replacing a signalized intersection on a surface street; and projects where design year traffic is projected to be less than 140,000 to 150,000 annual average daily traffic (AADT).

For these projects, a qualitative assessment of emissions projections should be conducted. This qualitative assessment should compare, in narrative form, the expected effect of the project on traffic volumes, vehicle mix, or routing of traffic and the associated changes in MSAT for the project alternatives, including no-build, based on VMT, vehicle mix, and speed. It should also discuss national trend data projecting substantial overall reductions in emissions due to stricter engine and fuel regulations issued by EPA. Because the emission effects of these projects typically are low, we expect there would be no appreciable difference in overall MSAT emissions among the various alternatives.

In addition to the qualitative assessment, a NEPA document for this category of projects must include a discussion of information that is incomplete or unavailable for a project specific assessment of MSAT impacts, in compliance with the Council on Environmental Quality (CEQ) regulations (40 CFR 1502.22(b)). This discussion should explain how current scientific techniques, tools, and data are not sufficient to accurately estimate human health impacts that could result from a transportation project in a way that would be useful to decision-makers. Also, in compliance with 40 CFR 1502.21(b), this discussion should contain information regarding the health impacts of MSAT.

(3) Projects with Higher Potential MSAT Effects

This category includes projects that have the potential for meaningful differences in MSAT emissions among project alternatives. FHWA expects a limited number of projects to meet this two-pronged test. To fall into this category, a project should:

* Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel PM in a single location, involving a significant number of diesel vehicles for new projects or accommodating with a significant increase in the number of diesel vehicles for expansion projects; or
* Create new capacity or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the AADT is projected to be in the range of 140,000 to 150,000 or greater by the design year;

And also

* Be proposed to be located in proximity to populated areas.

Projects falling within this category should be more rigorously assessed for impacts. If a project falls within this category, the project sponsor should contact the Office of Natural Environment (HEPN) and the Office of Project Development and Environmental Review (HEPE) in FHWA Headquarters for assistance in developing a specific approach for assessing impacts. This approach would include a quantitative analysis to forecast local-specific emission trends of the priority MSAT for each alternative, to use as a basis of comparison. This analysis also may address the potential for cumulative impacts, where appropriate, based on local conditions. How and when cumulative impacts should be considered would be addressed as part of the assistance outlined above.

If the analysis for a project in this category indicates meaningful differences in levels of MSAT emissions among alternatives, mitigation options should be identified and considered.

The project sponsor should also consult with HEPN and HEPE if a project does not fall within any of the types of projects listed in Category 3 above but may have the potential to substantially increase future MSAT emissions.

Project XXXXX falls under Category 1, 2, or 3. *If the project falls under Category 1, this text can be used.* Based on the characteristics of this project, it is considered an exempt project or a project of no meaningful potential MSAT effects. *If the project falls under Category 2, this text can be used.* The project improves operations without adding substantial new capacity or without creating a facility that is likely to meaningfully increase MSAT emissions. The XXXXX Design Year traffic is not projected to meet or exceed the 140,000 to 150,000 AADT criterion, meaning a quantitative MSAT analysis will not be required. *If desired, describe further how this specific project meets one category and not the other.*

## 5.6 Qualitative MSAT Analysis

*The next section provides prototype language for Category 1 projects. This language is drawn from Appendix A of the January 18, 2023 FHWA “Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents.”* *(*[*https://www.fhwa.dot.gov/environMent/air\_quality/air\_toxics/policy\_and\_guidance/msat/*](https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat/)*).*

The purpose of this project is to (insert major deficiency that the project is meant to address) by constructing (insert major elements of the project). This project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxic (MSAT) concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause a meaningful increase in MSAT impacts of the project from that of the no-build alternative.

Moreover, Environmental Protection Agency (EPA) regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA’s MOVES3 model forecasts a combined reduction of over 76 percent in the total annual emissions rate for the priority MSAT from 2020 to 2060 while vehicle-miles of travel are projected to increase by over 31 percent (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, January 18, 2023). This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

*The next section provides prototype language for Category 2 – qualitative Project-Level MSAT analysis. This language is drawn from Appendix B of the January 18, 2023, FHWA “Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents.” The information in this Appendix is for projects with low potential MSAT effects – any non-exempt project that does not meet the threshold criteria for higher potential effects as described in the interim guidance, should be considered for treatment provided here. The types of projects that fall into this category are those that improve operations of highways or freight facilities without adding substantial new capacity. Examples include minor widening projects, new interchanges, or replacing a signalized intersection on surface streets.*

*The following are some examples of qualitative MSAT analyses for different types of projects. Each project is different, and some projects may contain elements covered in more than one of the examples below. Analysts can use the example language as a starting point but should tailor it to reflect the unique circumstances of the project being considered. The following factors should be considered when crafting a qualitative analysis:*

* *For projects on an existing alignment, MSAT are expected to decline due to the effect of new EPA engine and fuel standards.*
* *Projects that result in increased travel speeds will reduce MSAT emissions per VMT basis, MOVES2014 provides an estimation of the effect of speed changes on diesel particulate matter and should be accounted for accordingly. This speed benefit may be offset somewhat by increased VMT if the more efficient facility attracts additional vehicle trips.*
* *Projects that facilitate new development may generate additional MSAT emissions from new trips, truck deliveries, and parked vehicles (due to evaporative emissions). However, these may also be activities that are attracted from elsewhere in the metro region; thus, on a regional scale there may be no net change in emissions.*
* *Projects that create new travel lanes, relocate lanes, or relocate economic activity closer to homes, schools, businesses, and other populated areas may increase concentrations of MSAT at those locations relative to No Action.*

*Other elements related to a qualitative analysis are a discussion of information that is incomplete or unavailable for a project specific assessment of MSAT impacts and a discussion of any MSAT mitigation measures that may be associated with the project.*

A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by FHWA entitled A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives, found at: [www.fhwa.dot.gov/environment/air\_quality/air\_toxics/research\_and\_analysis/mobile\_source\_air\_toxics/msatemissions.cfm](http://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/mobile_source_air_toxics/msatemissions.cfm).

*(1) Minor Widening Project*

*For purposes of this scenario, minor highway widening projects are those in which the design year traffic is predicted to be less than 140,000 – 150,000 AADT. Widening projects that surpass these criteria may be subject to a quantitative analysis.*

For each alternative in this EIS/EA (specify), the amount of mobile source air toxics (MSAT) emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for each of the Build Alternatives is slightly higher than that for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. Refer to Table 2 (specify).

Table 2. Change in Vehicle Miles Traveled, No-Build vs. Build

|  |  |  |  |
| --- | --- | --- | --- |
| **Roadway** | **Scenario** | **(YEAR) Vehicle Miles Traveled (VMT)** | **Percent Change in VMT Compared to No-Build Alternative** |
| **Road Name** | No-Build | XX,XXX |   |
| Build Alternative  | XX,XXX | XX% |

This increase in VMT would lead to higher MSAT emissions for the preferred action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to the Environmental Protection Agency’s (EPA) MOVES3 model, emissions of all of the priority MSAT decrease as speed increases. Because the estimated VMT under each of the Alternatives are nearly the same, varying by less than \_\_\_\_\_\_ (specify) percent, it is expected there would be no appreciable difference in overall MSAT emissions among the various alternatives. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 76percent between 2020 and 2060 (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, January 18, 2023). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

*The following paragraph may apply if the project includes plans to construct travel lanes closer to populated areas.*

The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSAT could be higher under certain Build Alternatives than the No Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the expanded roadway sections that would be built at \_\_\_\_\_\_\_\_ (specify location), under Alternatives \_\_\_\_\_\_\_\_(specify), and along \_\_\_\_\_\_ (specify route) under Alternatives \_\_\_\_\_\_\_\_ (specify). However, the magnitude and the duration of these potential increases compared to the No-Build alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. In sum, when a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region wide MSAT levels to be significantly lower than today.

*(2) New Interchange Connecting an Existing Roadway with a New Roadway*

*This scenario is oriented toward projects where a new roadway segment connects to an existing limited access highway. The purpose of the roadway is primarily to meet regional travel needs, e.g., by providing a more direct route between locations.*

For each alternative in this EIS/EA (specify), the amount of mobile source air toxics (MSAT) emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. Because the VMT estimated for the No Build Alternative is higher than for any of the Build Alternatives, higher levels of MSAT are not expected from any of the Build Alternatives compared to the No Build. Refer to Table 2 (specify).

Table 2. Change in Vehicle Miles Traveled, No-Build vs. Build for all Alternatives

|  |  |  |  |
| --- | --- | --- | --- |
| **Roadway** | **Scenario** | **(YEAR) Vehicle Miles Traveled (VMT)** | **Percent Change in VMT Compared to No-Build Alternative** |
| **Road Name** | No-Build | XX,XXX |   |
| Build Alternative 1 | XX,XXX | XX% |

In addition, because the estimated VMT under each of the Build Alternatives are nearly the same, varying by less than \_\_\_\_\_\_\_\_\_(specify) percent, it is expected there would be no appreciable difference in overall MSAT emissions among the various alternatives. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of the Environmental Protection Agency’s (EPA) national control programs that are projected to reduce annual MSAT emissions by over 76 percent from 2020 to 2060 (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, January 18, 2023). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all locations.

Under each alternative there may be 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 localized increases in MSAT emissions would likely be most pronounced along the new roadway sections that would be built at \_\_\_\_\_\_\_ (specify location), under Alternatives \_\_\_\_\_\_\_\_ (specify), and along \_\_\_\_\_\_\_\_ (specify route) under Alternatives \_\_\_\_\_\_\_\_ (specify). However, even if these increases do occur, they too will be substantially reduced in the future due to implementation of EPA's vehicle and fuel regulations.

In sum, under all Build Alternatives in the design year it is expected there would be reduced MSAT emissions in the immediate area of the project, relative to the No Build Alternative, due to the reduced VMT associated with more direct routing, and due to EPA's MSAT reduction programs.

*(3) New Interchange Connecting New Roadways*

*This scenario is oriented toward interchange projects developed in response to or in anticipation of economic development, e.g., a new interchange to serve a new shopping/residential development. Projects from the previous example may also have economic development associated with them, so some of this language may also apply.*

For each alternative in this EIS/EA (specify), the amount of mobile source air toxics (MSAT) emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for each of the Build Alternatives is slightly higher than that for the No Build Alternative, because the interchange facilitates new development that attracts trips that would not otherwise occur in the area. Refer to Table 2 (specify).

Table 2. Change in Vehicle Miles Traveled, No-Build vs. Build for all Alternatives

|  |  |  |  |
| --- | --- | --- | --- |
| **Roadway** | **Scenario** | **(YEAR) Vehicle Miles Traveled (VMT)** | **Percent Change in VMT Compared to No-Build Alternative** |
| **Road Name** | No-Build | XX,XXX |   |
| Build Alternative 1 | XX,XXX | XX% |

This increase in VMT means MSAT under the Build Alternatives would probably be higher than the No Build Alternative in the study area. There could also be localized differences in MSAT from indirect effects of the project such as associated access traffic, emissions of evaporative MSAT (e.g., benzene) from parked cars, and emissions of diesel particulate matter from delivery trucks (modify depending on the type and extent of the associated development). Travel to other destinations would be reduced with subsequent decreases in emissions at those locations.

Because the estimated VMT under each of the Build Alternatives are nearly the same, varying by less than \_\_\_\_\_\_\_\_ (specify) percent, it is expected there would be no appreciable difference in overall MSAT emissions among the various Build Alternatives. For all Alternatives, emissions are virtually certain to be lower than present levels in the design year as a result of the Environmental Protection Agency’s (EPA) national control programs that are projected to reduce annual MSAT emissions by over 76 percent from 2020 to 2060 (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, January 18, 2023). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future than they are today.

*The following discussion would apply to new interchanges in areas already developed to some degree. For new construction in anticipation of economic development in rural or largely undeveloped areas, this discussion would be applicable only to populated areas, such as residences, schools, and businesses.*

The travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools and businesses; therefore, under each alternative there may be localized areas where ambient concentrations of mobile source air toxics (MSAT) would be higher under certain Alternatives than others. The localized differences in MSAT concentrations would likely be most pronounced along the new/expanded roadway sections that would be built at \_\_\_\_\_\_ (specify location), under Alternatives \_\_\_\_\_\_\_ (specify), and along \_\_\_\_\_\_ (specify route) under Alternatives \_\_\_\_\_\_\_\_ (specify). However, the magnitude and the duration of these potential increases cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. Further, under all Alternatives, overall future MSAT are expected to be substantially lower than today due to implementation of the Environmental Protection Agency’s (EPA) vehicle and fuel regulations.

In sum, under all Build Alternatives in the design year it is expected there would be slightly higher MSAT emissions in the study area relative to the No Build Alternative due to increased VMT. There also could be increases in MSAT levels in a few localized areas where VMT increases. However, EPA's vehicle and fuel regulations will bring about significantly lower MSAT levels for the area in the future than today.

*(4) Minor Improvements or Expansions to Intermodal Centers or Other Projects that Affect Truck Traffic*

*The description for these types of projects depends on the nature of the project. The key factor from an MSAT standpoint is the change in truck and rail activity and the resulting change in MSAT emissions patterns.*

For each alternative in this EIS/EA (specify), the amount of mobile source air toxics (MSAT) emitted would be proportional to the amount of truck vehicle miles traveled (VMT) and rail activity, assuming that other variables (such as travel not associated with the intermodal center) are the same for each alternative. The truck VMT and rail activity estimated for each of the Build Alternatives are higher than that for the No Build Alternative, because of the additional activity associated with the expanded intermodal center. Refer to Table 2 (specify).

Table 2. Change in Truck Vehicle Miles Traveled and Rail Activity, No-Build vs. Build for all Alternatives

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Roadway** | **Scenario** | **(YEAR) Truck Vehicle Miles Traveled (VMT)** | **Percent Change in VMT Compared to No-Build Alternative** | **(YEAR) Rail Activity** | **Percent Change in Rail Activity Compared to No-Build Alternative** |
| **Road Name** | No-Build | XX,XXX |   |  |  |
| Build Alternative  | XX,XXX | XX% |  |  |

This increase in truck VMT and rail activity associated with the Build Alternatives would lead to higher MSAT emissions (particularly diesel particulate matter) in the vicinity of the intermodal center. The higher emissions could be offset somewhat by two factors: 1) the decrease in regional truck traffic due to increased use of rail for inbound and outbound freight; and 2) increased speeds on area highways due to the decrease in truck traffic. The extent to which these emissions decreases will offset intermodal center-related emissions increases is not known.

Because the estimated truck VMT and rail activity under each of the Build Alternatives are nearly the same, varying by less than \_\_\_\_\_\_\_ (specify) percent, it is expected there would be no appreciable difference in overall MSAT emissions among the various alternatives. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of the Environmental Protection Agency’s (EPA) national control programs that are projected to reduce annual MSAT emissions by over 76 percent from 2020 to 2060 (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, January 18, 2023). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the EPA-projected reductions are so significant (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future as well.

*The following discussion may apply if the intermodal center is close to other development.*

The additional freight activity contemplated as part of the project alternatives will have the effect of increasing diesel emissions in the vicinity of nearby homes, schools, and businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSAT would be higher than under the No Build alternative. The localized differences in MSAT concentrations would likely be most pronounced under Alternatives \_\_\_\_\_\_\_(specify). However, as discussed above, the magnitude and the duration of these potential differences cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific health impacts. Even though there may be differences among the Alternatives, on a region-wide basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will cause substantial reductions over time that in almost all cases the MSAT levels in the future will be significantly lower than today.

*Insert a description of any emissions-reduction activities that are associated with the project, such as truck and train idling limitations or technologies, such as auxiliary power units; alternative fuels or engine retrofits for container-handling equipment, etc.*

In sum, the Build Alternatives in the design year could be associated with higher levels of MSAT emissions in the study area, relative to the No Build Alternative, along with some benefit from improvements in speeds and reductions in region-wide truck traffic. There also could be slightly higher differences in MSAT levels among Alternatives in a few localized areas where freight activity occurs closer to homes, schools, and businesses. Under all alternatives, MSAT levels are likely to decrease over time due to nationally mandated cleaner vehicles and fuels.

## 5.7 Incomplete or Unavailable Information for Project Specific MSAT Health Impact Analysis

*Prototype language is drawn from the January 18, 2023 FHWA “Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents,” Appendix C. (*[*https://www.fhwa.dot.gov/environMent/air\_quality/air\_toxics/policy\_and\_guidance/msat/*](https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat/)*).*

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The U.S. Environmental Protection Agency (EPA) is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, <http://www.epa.gov/iris/>). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are; cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI Special Report 16, https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects) or in the future as vehicle emissions substantially decrease.

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts - each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (Special Report 16, <https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects>). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA states that with respect to diesel engine exhaust, “[t]he absence of adequate data to develop a sufficiently confident dose-response relationship from the epidemiologic studies has prevented the estimation of inhalation carcinogenic risk (EPA IRIS database, Diesel Engine Exhaust, Section II.C.” <https://iris.epa.gov/static/pdfs/0642_summary.pdf>)

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine an “acceptable” level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA’s approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable ([https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/$file/07-1053-1120274.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/%24file/07-1053-1120274.pdf)).

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

# 6.0 Construction Air Quality

During construction of the proposed project, all materials resulting from clearing and grubbing, demolition or other operations will be removed from the project, burned or otherwise disposed of by the Contractor. Any burning done will be done in accordance with applicable local laws and ordinances and regulations of the North Carolina SIP for air quality in compliance with 15A NCAC 02D.1901. Care will be taken to ensure burning will be done at the greatest distance practical from dwellings and not when atmospheric conditions are such as to create a hazard to the public. Burning will be performed under constant surveillance. Also, during construction, measures will be taken to reduce the dust generated by construction when the control of dust is necessary for the protection and comfort of motorists or area residents.

Air quality impacts resulting from roadway construction activities are typically not a concern when contractors utilize appropriate control measures. In North Carolina, contractors shall perform all construction activities with adequate control measures in place, e.g. watering exposed surfaces, covering or maintaining free board space on haul trucks, limiting vehicle speeds on unpaved roads, and minimizing equipment idling time. The temporary air quality impacts from construction are not expected to be significant.

# 7.0 Summary

*A brief conclusion section is recommended to summarize the results of the air quality assessment.*

Vehicles are a major contributor to decreased air quality because they emit a variety of pollutants into the air. Changing traffic patterns are a primary concern when determining the impact of a new highway facility or the improvement of an existing highway facility. New highways or the widening of existing highways increase localized levels of vehicle emissions, but these increases could be offset due to increases in speeds from reductions in congestion and because vehicle emissions will decrease in areas where traffic shifts to the new roadway. Significant progress has been made in reducing criteria pollutant emissions from motor vehicles and improving air quality, even as vehicle travel has increased rapidly. The proposed project is located in XXXX County, which is/is not in attainment with the NAAQS (if the area is in non-attainment or maintenance for any of the NAAQS, list that again here). Therefore, the proposed project is not expected to create any adverse effects on air quality.