4.8.2 Traffic Noise Abatement Strategies

This subsection discusses traffic noise abatement strategies commonly applied to roadway projects. A comprehensive traffic noise impact analysis will occur in Tier Two, which will identify traffic noise impacts and evaluate the feasibility and reasonableness of mitigation measures using the FHWA Traffic Noise Model. Several proven traffic noise abatement strategies, both structural and nonstructural, could be used in combination to reduce the impacts of traffic noise. Traffic noise abatement strategies are discussed below, and traffic noise mitigation techniques are described in subsection 4.13.11. The construction of noise walls is a common method for mitigating traffic noise impacts in urban and suburban areas. Noise walls can absorb or reflect noise. Walls tall enough to break the line of sight from the noise source to the receptor usually are generally capable of achieving a five-dBA reduction in traffic noise levels.

Earth berms are effective for traffic noise mitigation, but they often require much larger areas of land (additional right-of-way) for construction than noise walls. Berms covered with grass, shrubs or small plants are more affective at attenuating traffic noise than harder surfaces.

Traffic noise abatement options must be feasible and economically reasonable. To be considered feasible, IDOT's noise policy requires that traffic noise abatement measures achieve at least an eight-dBA traffic noise reduction. Certain environmental conditions, such as frequent openings for driveways, access roads, recreational trails, or stream crossings, can limit the effectiveness and feasibility of a noise abatement structure. The traffic noise abatement measures must also be cost-effective to be considered economically reasonable. IDOT considers a cost of $24,000 per benefitted receptor a reasonable cost. A benefitted receptor is any sensitive receptor that receives at least a five-dBA traffic noise reduction from the traffic noise abatement option.

Nonstructural traffic noise abatement methods include traffic management plans and comprehensive land use planning. Traffic management plans can limit travel speeds, traffic volumes, types of motor vehicles in use, and time of operation. Traffic noise abatement is not often the primary concern of a traffic management plan, but it is a common ancillary benefit. An efficient and effective traffic noise abatement strategy is to implement an integrated and comprehensive land use plan through local communities and jurisdictions. Land use plans should include noise compatible concepts so that noise sensitive land uses are not located adjacent to highways or are developed so as to minimize traffic noise impacts.

4.9 Visual Resources

4.9.1 Visual Resource Analysis

The analysis of potential impacts to visual resources caused by construction or operation of the proposed improvements was completed based on FHWA's Visual Impact Assessment for Highway Projects (1981). The following criteria were used to assess the visual impact of the build alternatives:

- What are the visual characteristics of the site and the proposed project site/alternative?
- How would implementation of the project affect the visual character of the study area?

- Would the project substantially damage scenic resources, such as trees, wetlands, woodlands, or other landscape features?
- Would the project substantially degrade the visual character or quality of the surrounding areas?
- Would the project create a new source or substantial light or glare that would adversely affect day or nighttime views in the area?
- What major groups (e.g., neighborhoods, vehicle passengers) are likely to see the project? How would the major groups be affected by the various alternatives?

Visual resources are aspects of the environment that determine the physical character of an area and the manner in which it is viewed. Visual resources include scenery viewed at various distances, as well as cultural manmade modifications, vegetation, and other landforms.

4.9.2 Visual Impact Assessment

The study area is generally developed with the exception of protected lands (e.g., forest preserves, parks, etc.). The original landscape has been fully altered and contains suburban/urban development (primarily industrial uses) accompanied by supporting infrastructure (roads, parking lots and driveways), intermixed with urban landscaping, open space (including old fields), or limited forested cover. Much of Thorndale corridor and the western edge of the O'Hare Airport is industrial in nature and characterized by large-scale industrial buildings and warehouses. Similarly, most of the O'Hare West Bypass corridor (both north and south sections, and for both Alternatives 203 and 402) is either industrial or airport-related. One exception is on the north section of Alternative 203, which contains a residential area (east of York Road/Elmhurst Road near IL 72/Touhy Avenue). Most undeveloped lands in the area are surrounded by development and consist primarily of urban open space (e.g., mowed lawn and old field successional areas) and to a lesser extent degraded woodlands. The area is exposed to the scale of transportation development represented by the proposed build alternatives. Thus, its character is somewhat resilient to more hardened manmade features, such as major highway and transit corridors.

The proposed build alternatives generally would maintain the character of the area without creating unusual contrast in landscape, land use, or developed features. Roadway and transit improvements in the Thorndale corridor or on the western edge of O'Hare Airport would be seemingly appropriate and do not give rise to something that does not fit the scene of the study area.

Key locations where the roadway structures will be elevated and visible from nearby areas include I-90 and the north section of the O'Hare West Bypass (both alternatives); the Elgin O'Hare Expressway and the O'Hare West Terminal Interchange (both alternatives); and south bypass connection options and I-294 (both Options A and D). Generally, the viewsheds in the study area are short, with truncated sightlines. The viewsheds would not differ under either alternative, the typical view being largely industrial and commercial development to the other side of the roadway. The exception would be the O'Hare West Bypass (for Alternative 203, both the north and south sections; for Alternative 402, the south section), where vehicle passengers (not necessarily drivers) would have a closer view of airport operations, which tend to fascinate some people.

Overall, the proposed transportation improvements bring more of the same to the study area without causing a major visual disruption to community centers, neighborhoods, or recreational areas. There are some locales for which design treatment are warranted to lessen visual or other human disturbance. For those areas, specific mitigation may be evaluated and addressed in Tier Two of the process.

4.10 Special Waste

Various databases were examined to locate known or potential contamination from regulated substances near the build alternatives. Information used for this analysis was obtained from known federal, state and local environmental databases, which are described below. The databases represent historical records of known special waste sites, spills, or enforcement actions. A Special Waste Assessment (SWA) will be completed in Tier Two to better characterize the likelihood of involvement with special waste sites and determine whether a Preliminary Environmental Site Assessment (PESA) is required. Because right-of-way may be acquired and building demolition and utility relocation would be required, a PESA most likely would be required in Tier Two.

A broad risk assessment was applied to the types of sites encountered. Risks to human and environmental health and estimated cleanup costs were considered. Special waste sites were placed in the following categories:

- **High Risk.** Active Comprehensive Environmental Response, Compensation, Liability Act (CERCLA) sites and Toxics Release Inventory (TRI) sites using volatile organic compounds (VOCs) and engaged in enforcement action or that formerly had hazardous waste processing activity onsite.
- **Moderate Risk**. Archived CERCLIS sites (except those with a No Further Remediation Action Planned designation); RCRA large-quantity generators; leaking UST (LUST) sites not reclassified as non-LUST; Site Remediation Program (SRP) sites; TRI sites using VOCs with no known violations; UST sites; and landfills.
- **Low Risk.** CERCLIS sites with No Further Remediation Action Planned designation; RCRA small-quantity or conditionally exempt generators; LUST sites redesignated as Non-LUST sites; and other TRI sites with no enforcement action.

The database search revealed that each alternative could potentially encounter special waste sites during construction. The potential impacts each build alternative and south bypass connection option would have on such sites are described in the following subsections and shown in Exhibit 4-10.

4.10.1 Hazardous Waste Sites

One active CERCLIS site within the footprint of Alternatives 203 and 402 is considered a high risk site. Two archived CERCLIS sites are within the footprints of Alternatives 203 and 402. They have received a "No Further Remediation Action Planned" status and are characterized as low risk. An archived CERCLIS site is within the footprint of both Options A and D. The site has a "No Further Remediation Action Planned" designation and is characterized as low risk. Nine additional active CERCLIS sites are located within one mile of Alternative 203, and