ENVIRONMENTAL STUDIES FINDINGS

IMPROVEMENTS SH-10 IN GROVE FROM THE US-59 INTERSECTION AND EXTENDING EAST TO SH-25
DELAWARE COUNTY
J/P 33827(04) & 32699(04)

The project area was assessed for environmental resources or conditions that pose any type of problems. The following is a summary of known environmental challenges in the project area:

Waters and Wetlands:

In a nutshell: No adverse impacts are expected. A permit may be required because of potential stream and wetland impacts.

More in depth: The proposed project could cross several streams and tributaries. Any new stream crossings will incorporate water quality protection best management practices to prevent erosion and keep sediment out of the creeks. New and modified crossings would be subject to U.S. Army Corps of Engineers permitting under Section 404 of the Clean Water Act with a Nationwide General Permit. No significant, permanent adverse impacts to waterbodies are expected.

Threatened and Endangered Species:

In a nutshell: A habitat review was completed and threatened and endangered wildlife species were identified in the project area. No adverse impacts to protected species are expected.

More in depth: Habitat reviews were conducted for federally listed threatened and endangered species, as well as for other protected bird species. There are several protected species of birds, bats, mussels and insects potentially located within the study area or general vicinity, but there was no designated critical habitat. Consultation with the U.S. Fish and Wildlife Service was conducted and it was determined that no permanent adverse impacts to threatened and endangered species are anticipated.

Cultural Resources:

In a nutshell: No effects on cultural resources are anticipated. A full cultural resources study is in progress.

More in depth: Cultural resources impacts were preliminarily reviewed by ODOT's Cultural Resources Program. No potentially significant historic or pre-historic sites or properties were found within the general vicinity of the proposed project during the desktop assessment. Based off of previous surveys and the setting, it was predicted that the likelihood of encountering quality archaeological sites is minimal. A full cultural resources field study is in progress. The cultural resources report will be submitted to the

State Historic Preservation Office (SHPO) and tribes for review following Section 7 requirements under the National Historic Preservation Act (NHPA).

Hazardous Materials:

In a nutshell: No impacts are expected. A full hazardous materials study is in progress.

More in depth: Hazardous materials and waste related impacts were determined by evaluating the regulatory database reports, assessing the Oklahoma Corporation Commission's (OCC) records, reviewing the Oklahoma Water Resources Board's (OWRB) well databases, and by performing a field study. Some areas were identified that could pose an environmental risk within the proposed project footprint and adjacent to the study area (e.g., gas stations, repair shops, etc.). ODOT is currently assessing the potential impacts as they relate to the project, but these sites are not considered to be high risk. No significant adverse impacts are anticipated.

Floodplains:

In a nutshell: Portions of the project are located within a floodplain. Any development or fill within a floodplain area may require permitting.

More in depth: During large rain events and wet seasons, the floodplain helps to manage flood waters and prevent impacts to homes and property. ODOT will avoid or minimize any impact to an acceptable level. Any development or fill within a floodplain area may require permitting.

Noise:

In a nutshell: A traffic noise study identified one residence that will be impacted by noise. A noise wall would not be effective since highway access is needed.

More in depth: The analysis utilized the FHWA Traffic Noise Model version 2.5 in accordance with FHWA 23CFR 772 and complies with the ODOT Noise Policy dated July 13, 2011. For the purpose of validating the model, three sound level measurements were taken from three locations along the project. These measurements were within ±3 dB(A) of the TNM predicted values which indicates the TNM 2.5 model will accurately estimate future noise levels.

Nine residential receptor locations were analyzed as Noise Abatement Criteria Activity Category B (NAC-B), one sport facility location was analyzed as Noise Abatement Criteria Activity Category C (NAC-C), two places of worship were analyzed as Noise Abatement Criteria Activity Category D (NAC- D). Under the current conditions, no traffic noise impacts occur. Based on the proposed project and future traffic volumes, the noise level for one residential receptor would approach the 67 decibel (dB(A) Leq (h)) criteria for

NAC-B. Furthermore, no receptors will experience a substantial increase (i.e., 15 dB) in future noise levels over the existing levels, with the highest increase being 6.1 dB.

Noise mitigation in the form of a free-standing noise wall within the project right-of-way is considered the most appropriate noise abatement measure for the one impacted receptor, R-3. This receptor has direct driveway access to SH-10. Without access control, the gap that would be required for the driveway connection access would make noise abatement measures ineffective, and therefore, a noise wall would not prove feasible.

To aid in noise-compatible land use planning purposes, the future impact zone (i.e., 66 dB(A) contour line) was determined at a maximum of 160 feet from the centerline of SH-10. Any future development within this area should be compatible with elevated traffic noise levels. Due to anticipated future noise levels, residential (NAC-B) and all NAC-C uses are discouraged within the impact zone.