



EXECUTIVE SUMMARY

This Conceptual Alternative Study (CAS) Report was prepared for the HAM-75-2.30 Project (I-75 Mill Creek Expressway study) as part of Step 5 of the Ohio Department of Transportation's (ODOT's), Project Development Process (PDP) for Major Projects.

The CAS includes a summary of the previous documents submitted and approved by ODOT. They include the Draft Purpose and Need, Existing and Future Conditions Report, Red Flag Summary and Planning Study Report Summary, whose contents were utilized in the determination of the conceptual alternatives. An update of the Public Involvement Plan is also included, listing relevant project meetings, mobile display locations and public comments received to date.

The subsequent section, Development of Conceptual Alternatives, summarizes the methodology utilized to develop the Conceptual Alternatives in Step 5 and provides a detailed description of each.

The conceptual alternatives were evaluated based on design issues and preliminary environmental evaluations. The results of these analyses are summarized *by impact/issue* in the Evaluation of Conceptual Alternatives.

These analyses are summarized *by alternative* in the Comparison Matrices and Conclusions section. Based upon the provided evaluations, alternatives will be recommended for advancement. The Feasible Alternatives that are chosen for further work will be analyzed in greater detail in Step 6 of the PDP, with additional environmental investigations and coordination.

Important conclusions from the Step 5 are summarized below.

The mainline alternatives to be carried forward to Step 6 include:

- I75-A: 4-Lane Continuity Alternative, which provides an additional through lane north of the I-74 interchange northbound and southbound, and
- I75-D: 5/4-Lane Alternative, which provides one additional through lane throughout the project limits, for four lanes in each direction north of I-74 and five lanes in each direction south of I-74.

Neither of these alternatives will achieve Level of Service D throughout the project limits. However, the consideration of additional lanes was eliminated based upon public input from the North South Transportation Initiative (NSTI), impacts and costs. More information on this topic is provided in a technical memorandum in Appendix 4.



Interchange alternatives carried forward from the Planning Study Report were evaluated in greater detail. The majority are recommended for continued consideration in Step 6 of the PDP, with the following noted exceptions, which were eliminated due to concerns with operational or geometric feasibility.

- The HOP-B: Offset Roundabout Diamond Interchange was replaced with the HOP-B1 Offset Diamond Interchange which utilizes a signalized intersection in lieu of a roundabout.
- The I74-A: Fully Directional Interchange with Local Access Maintained will require additional analysis during Step 6 due to vertical infeasibility of the southbound I-75 to Colerain ramp.



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INTRODUCTION

The purpose of the Conceptual Alternatives Study (CAS) is to develop and evaluate alternatives that avoid or minimize impacts to design and environmental red flag areas within the study area during Step 5 of the Ohio Department of Transportation's (ODOT's) 14-Step Project Development Process (PDP) for Major Projects. (For reference, a graphic of this process has been included in Exhibit A.) The CAS is the combined design and environmental document that refines and analyzes the transportation improvements selected for further study in Step 4. This report is based on the information provided in the Planning Study Report and includes the information developed throughout Step 5.

By Step 5, the design team has developed and evaluated horizontal alignments for the I-75 mainline and several interchange concepts. At this point in the Project Development Process, the design of concepts and evaluation of their potential impacts are based upon: topographic mapping from aerial photography by ODOT, property information from CAGIS, previous geotechnical evaluations, information provided by major utilities, and information on social, economic and environmental resources available from secondary sources. At this stage, field studies are limited to traffic analysis, ecological survey, Environmental Site Assessment screening, Phase I History/Architecture evaluation, and field reviews as needed by planners and engineers to understand existing conditions.

This report does not reflect final design details nor complete environmental studies, coordination or mitigation. It is the first major submission for early consideration of these issues, which will be expanded upon in future steps of the process.

Project History

In 2000, the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and the Miami Valley Regional Planning Commission (MVRPC) cooperated on a regional multi-modal transportation plan and Major Investment Study named the North South Transportation Initiative (NSTI). The primary focus of the NSTI was to determine how to improve the safety, efficiency and reliability of transportation networks within Southwest Ohio, Northern Kentucky and Southeast Indiana. Analysis of the existing and future travel corridors was combined with input obtained from stakeholders and the public. As a result, several projects were established to address the original focus of the NSTI. One of the most important corridors established by the public and stakeholders was Interstate 75. The I-75 Mill Creek Expressway study is intended to build upon this major investment study and refine the recommendations within this portion of the I-75 corridor.

The NSTI's original preferred program of projects was divided into three classifications: Corridor