



NEVADA DEPARTMENT OF TRANSPORTATION RESEARCH DIVISION

INVESTIGATING IMPLEMENTATION POTENTIALS OF TURBO ROUNABOUTS IN NEVADA

Key · Points

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\$254,102.00

Researcher:
West Virginia
University Research
Corporation

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PROBLEM

Turbo roundabouts are a new type of roundabout that provides a spiraling flow of traffic with mountable raised lane dividers that control the traffic path and speed, requiring drivers to choose their direction before entering the roundabout. As an alternative to conventional roundabouts, turbo roundabouts are used to address both capacity and safety issues at locations where single-lane roundabouts hardly serve the traffic demand while multi-lane roundabouts may lead to an increase of collisions. The Nevada Department of Transportation (NDOT) promotes the installation of roundabouts at selected state roadway intersections to improve safety and mobility, and turbo roundabouts can be an option for the future roundabout development in Nevada. Therefore, research will be needed to study the implementation potentials of turbo roundabouts in Nevada.

OBJECTIVE

The research will investigate the implementation potentials of turbo roundabouts in Nevada through evaluations of applicable conditions, safety benefits, operational performances, costs, etc. The research results can be used by transportation

agencies in Nevada or other jurisdictions in order to implement and operate turbo roundabouts in the future.

METHODOLOGY

The research will comprehensively investigate the current studies and successful practices developed in foreign countries. Regarding cases in Nevada, the installation considerations, design considerations, operational considerations, and education and public involvement will be studied.

IMPLEMENTATION POTENTIAL

The research will facilitate the development of turbo roundabouts in Nevada and other states in the nation. Installation warrants, design adaption, and operational recommendations are anticipated, which can help agencies determine the need for turbo roundabout installations as well as effectively manage and operate implemented turbo roundabouts in the future.

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