



Michigan Avenue and South Harrison Road, East Lansing, MI

MEDIAN U-TURN INTERSECTION

THE PROBLEM

This busy intersection experienced lengthy queues of left turning vehicles. The result was congestion that restricted through movements and threatened the safety of a significant number of pedestrians and bicyclists.

THE SOLUTION

Conversion of the intersection to a Median U-Turn to improve access to non-motorized users and increase throughput.

THE OUTCOME

- Improved pedestrian and bicycle facilities at both signalized and mid-block crossings to increase safety and mobility for these users.
- Increased throughput due to the elimination of queuing at the signal.



MUT Pedestrian Crossing
Source: MUT Case Study Video FHWA-SA-14-049

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INTERSECTION LOCATION

42°44'00.7"N 84°29'36.9"W

Background

Michigan Avenue in East Lansing, MI experiences approximately 10,000 vehicles per day.¹ The surrounding area includes a large residential zone and the campus of Michigan State University (MSU), one of the largest universities in the United States.

Challenges

In addition to experiencing lengthy queues of left turning vehicles, this intersection has significant pedestrian and bicycle traffic, with one of the largest MSU dormitories located near the corner of Michigan Avenue and South Harrison Road. Furthermore, the community had a goal of improving mobility for non-motorized traffic.

Approach

This intersection became part of a \$6 million multi-stage project to renovate the area's roads. As a result, the Michigan DOT (MDOT) converted the intersection to an MUT both to improve safety for pedestrians and bicyclists as well as to increase traffic flow along the roadway. As part of this project, MDOT designed the Median U-Turn bays to accommodate longer, articulated buses, and constructed a new bus haven on Michigan Avenue. Bike racks are available at each bus stop. Dedicated bike lanes make it easy for bicyclists to navigate the intersection and provide a buffer for stopped buses.



Intersection of Michigan Avenue and South Harrison Road
Source: MUT Case Study Video FHWA-SA-14-049

Dedicated bike lanes make it easy for bicyclists to navigate the intersection and provide a buffer for stopped buses.

Results

In addition to improving traffic flow, the new MUT resulted in pedestrian and bicycle facility improvements both at signal and mid-block crossings – meeting the community's goals to increase mobility for non-motorized traffic. Because conflicts between pedestrians and turning vehicles are eliminated and the median provides a safe haven for pedestrians and bicyclists, area residents have experienced a safer pedestrian environment. In addition, updated bicycle and transit accommodations have been installed and intersection throughput has been improved.

“The [intersection] provides walkability. It's more pedestrian friendly.”

— Danielle Deneau, P.E.
Director of Traffic Safety
Road Commission for Oakland County, MI

¹ Michigan DOT, Construction Plans, M-43, Old 143, Job Number 113167A, approved December 11, 2012.

