



I-680 AND SR 164 NEW INTERCHANGE

CHALLENGE

AS TRAFFIC INCREASED ON LOCAL ROADS, A SOLUTION TO REDUCE TRAFFIC CONGESTION WAS NEEDED.

SERVICES

- Traffic Engineering
- Roadway Design
- Tower Lighting Design
- Culvert Design
- Survey
- Right-of-Way Plans
- Best Management Practices (BMP) Design

I-680 AND SR 164 NEW INTERCHANGE

Southern Mahoning County, located in Ohio, experienced significant residential and commercial growth. This placed high-traffic demands on local roadways that were not meant for higher traffic levels. Ultimately, this caused increased traffic congestion and crashes where the I-680 interchange connects with Western Reserve Road/SR 164.

Additionally, the portion of I-680 between Western Reserve Road and the Ohio Turnpike was significantly under-used, functioning as a long ramp to/from the

Turnpike Toll Plaza. Realizing this missed opportunity, [Eastgate Regional Council of Governments](#) wanted to explore the addition of a new interchange at the SR 164 overpass. The goal was to encourage more local traffic to use I-680 via an interchange two miles south and relieving traffic congestion at Western Reserve Road.

I-680 CORRIDOR STUDY

Eastgate, in cooperation with the Ohio Department of Transportation (ODOT), first hired ms consultants, inc. in 2007 to study and evaluate the traffic congestion and safety problems within the southern I-680 corridor. The corridor limits included I-680 from just north of the Western Reserve Road interchange to south of the Ohio Turnpike (I-76) interchange.

ms completed the study, which involved considering:

- The feasibility of constructing a new interchange at SR 164 and I-680 to help alleviate the traffic demands on Western Reserve Road by

encouraging more vehicles to stay on I-680

- Parallel routes within the corridor to understand how to better use I-680 south of Western Reserve Road
- Improvements to commuter safety, which included modifying the Western Reserve Road interchange and improving sight distance at the SR 626 intersection

ms also completed traffic studies and evaluated current and future traffic volumes, accident rates and locations, and the existing roadway network's capacity.

PRELIMINARY AND FINAL DESIGN

Upon restarting the project in 2016, the selected alternative included the addition of:

- New I-680 interchange at SR 164, including full-access ramps
- Southbound lane on SR 164 between I-680 and SR 626
- Northbound, left-turn lane on SR 164 between I-680 and the northbound on-ramp
- New roundabout at the SR 164 and SR 626 northern junction and replacing the bridge over the Ohio Turnpike, both designed by JMT

The ms team designed and prepared the construction plans for the new interchange, including the widening of SR 164.

ms also provided:

- Management and oversight, including coordinating the work with OTIC and other consultants
- Roadway and traffic plans
- Drainage design and interchange grading
- BMP design
- Culvert design
- Survey
- Right-of-way plans

Additionally, the project required avoiding impacts to the adjacent Ohio Turnpike Toll Plaza, and an existing pond and consideration of abandoned mines.

A SUCCESSFUL PROJECT

The project's unique funding led to a successful project. To fund the entire project, there were multiple funding sources and agencies, including ODOT Preservation, ODOT Safety, Transportation Review Advisory Council (TRAC), Eastgate, and Ohio Turnpike and Infrastructure Commission (OTIC).

Included with the construction of the interchange is a new park and ride lot (Part 3), encouraging commuters to use public transport or ride share, which further

reduces roadway traffic and improves safety. The lot was designed by ODOT.

Through the addition of the interchange, lanes, a roundabout and bridge (designed by JMT), area traffic congestion is reduced and public safety is increased.