



SOUTHERN OHIO VETERANS MEMORIAL HIGHWAY

CHALLENGE

TO END ISOLATION FOR AN UNDER-SERVED AREA, A NEW ROADWAY WAS NEEDED TO CONNECT PEOPLE TO JOBS, ALLEVIATE CONGESTION, ENHANCE SAFETY, AND IMPROVE TRAFFIC MOVEMENT AROUND A SOUTHERN OHIO CITY.

SERVICES

- Highway Design
- Bridge Design
- Traffic Engineering
- Retaining Wall Design
- Traffic Control
- Lighting Design
- Landscaping
- Alternative Delivery

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The first-ever Public/Private Partnership (P3) project for ODOT involved the design, construction and long-term maintenance of a new 16 mile, four lane divided, limited-access highway around the City of Portsmouth, Ohio, bypassing approximately twenty-six miles of US-52 and US-23. The highway is designated as State Route 823 (S.R. 823), the Southern Ohio Veterans Memorial Highway.

The project included construction of 5 new interchanges and 23 new bridges. The project delivery method was Design-Build-Finance-Operate-Maintain (DBFOM). Design of the project started on January 5, 2015 and the highway opened to traffic on December 14, 2018.

BENEFITING THE PUBLIC

This roadway completes the Appalachian Highway System in Ohio, serving as a bypass around the City of Portsmouth, where congestion was a growing problem.

Benefits of the additional route include:

- Decrease in congestion and transit times
- Reduced traffic
- Reduced noise
- Increased air quality

- Reduced transit costs

Economic development is also a large part of the project's purpose. In 1965, the US Congress created the Appalachian Development Highway System (ADHS) expressly to provide growth opportunities for the Appalachia residents. The region is absent of available locations for new business sites due to the hilly terrain and brownfields along the US-23 and US-52 corridors. This new highway, along with the three interior interchanges, opens up land previously inaccessible and under-developed.

WORKING TOGETHER FOR OHIO'S FIRST P3 PROJECT

During the bidding and design phase of the project, all parties worked closely to develop the complex design and construction schedule. The project was broken down into four major segments, and then approximately 50 constructible buildable units (BUs).

ms consultants, as lead designer, performed the majority of design work, as well as managing the deliverables for each BU.

Coordination and communication between organizations was critical for the timely completion

of this project. In addition to ODOT, the Portsmouth Gateway Group, and the consultant teams, other entities were also involved:

- Scioto County Engineer
- Norfolk Southern and CSX
- AEP
- Other utility companies, including water, gas, fiber, telephone, and sanitary

CONSTRUCTION OF THE SOUTHERN OHIO VETERANS MEMORIAL HIGHWAY

When construction commenced in June 2015, the coordination effort for construction personnel, equipment, and material deliveries was massive.

Along the entire sixteen mile alignment, there were significant cuts and fills up to two hundred feet. The majority of the cuts included rock that had to be blasted and required rock-fall analyses and catchment designs for several different rock types.

Construction of the Southern Ohio Veterans Memorial Highway project included:

- 20 million cubic yards of earthwork
- 1 million square yards of asphalt
- 16 pre-stressed I-beam bridges

- 5 five-steel girder bridges
- Delivery of materials including more than 170-foot-long beams
- 100-foot-tall piers
- Beam lifting analysis over railroad tracks
- Haul road coordination and load ratings for temporary extreme construction equipment weights
- Complex design for drainage and post-construction Stormwater Management Best Practices (BMPs)
 - Including 80 culverts, ranging from 42 to 120 inches in diameter