



MORSE ROAD IMPROVEMENTS

CHALLENGE

THE CITY OF COLUMBUS WANTED TO REVIVE THE MORSE ROAD CORRIDOR, A ONCE THRIVING AREA OF NORTHERN COLUMBUS, WHICH NO LONGER MET SAFETY, PEDESTRIAN, OR TRAFFIC NEEDS.

SERVICES

- Aesthetics
- Environmental Documentation
- Geotechnical Engineering/Testing
- Lighting Design
- Maintenance of Traffic
- Public Involvement
- Right-Of-Way
- Roadway Design
- Signing and Marking
- Survey
- Traffic Signal Coordination
- Traffic Signal Design
- Utility Coordination

AWARDS



HONOR AWARD
American Council of Engineering
Companies (ACEC) of Ohio

MORSE ROAD IMPROVEMENTS

The Morse Road corridor, once a thriving area in northern Columbus, Ohio, had experienced significant changes over the years leading to a decline in popularity among businesses, consumers, tenants and homeowners. A highly-traveled arterial through the Northland community, Morse Road's configuration did not meet existing transportation demands, was a regular site of drainage problems, and created an unfriendly and potentially dangerous environment for pedestrians.

Northland Mall, once the anchor of the neighborhood, suffered as newer, more elaborate shopping malls were built in northern and northeastern Franklin County. The mall was mostly demolished in 2004. The only parts that remain are the former anchor stores of Lazarus, which was converted to offices for the Ohio Department of Taxation, and the former JCPenney store, which now houses a local theater group (Vaud-Villites) after being renovated.

The City of Columbus retained ms consultants to assist in improving the Morse Road corridor through a

comprehensive approach that addresses these issues and revives interest and pride among commercial and residential users.

To accomplish goals set by the city, ms designed improvements along Morse Road from Indianola Avenue to Cleveland Avenue, a distance of approximately 2.6 miles. The project plans were completed in three phases, the Gateway Improvements, located at the I-71 interchange; the Morse Road Improvements – Phase 1, located from I-71 to Karl Road; and the Morse Road Improvements–Phase 2, located from Karl Road to Cleveland Avenue. The purpose of each plan was to improve aesthetics, safety and operational efficiency for pedestrians, bicyclists and motorists alike. The project included the construction of a raised landscaped median, curbing, a new drainage system with storm sewers and catch basins, pedestrian and bicycle facilities, turning lanes, new lighting fixtures, synchronized mast arm traffic signal installations, and landscaping.

COMMUNICATION

Public involvement was an essential component to the preliminary engineering phase. ms led public meetings in order to interact with adjacent property owners, area residents and businesses. This interaction assisted in developing an understanding and exchanging ideas

with the many stakeholders involved. Additionally, ms developed a Web site to communicate with the public, and maintained the site through updates addressing public feedback and supplying current information.

SURVEYING

ms developed the base mapping for the project utilizing aerial mapping information and global positioning system survey methods. Survey work

included topographic identification, property boundary determination and the establishment of control points.

TRAFFIC ENGINEERING

As a component of the preliminary engineering, ms determined current traffic volumes in the area and prepared a traffic access management plan. This plan was used to determine needed access points, roadway lane configurations, service road modifications and locations for permitted U-turn movements. The construction of the proposed improvements resulted in

better and safer operating traffic access to adjacent properties.

Fourteen signal installations were redesigned to city of Columbus standards using mast arm signal supports. Video detection and video traffic monitoring were employed throughout the corridor. Traffic signal

coordination and the video devices communicate with the city's Traffic Management Center through coaxial cable interconnect. Fiber optic interconnect was specified for a portion of the project in order to provide

communication with the ODOT/City of Columbus Freeway Management System. New signing and pavement markings were included.

DRAINAGE

Plans were prepared to close the existing roadside ditches, place curb and gutter along the pavement edge and make improvements to expand the closed drainage system. Inlet spacing and pipe sizes were determined using the City of Columbus drainage criteria and HYDRA software. After completion of the hydraulic calculations, proposed features were included in the roadway construction plans and storm sewer profiles were prepared. An important consideration

for the drainage of the proposed road is the flat profile of Morse Road. In order to ensure proper drainage to new inlets along the proposed curb and gutter, it was necessary to plan adjustments in the profile to increase slopes along the road. The most cost effective method was to plan for addition of asphalt along portions of the roadway pavement in order to enhance or create high points.

PEDESTRIANS AND BICYCLISTS

The project incorporated ADA compliant sidewalks along both sides of the street, along with curb ramps and pedestrian crossings at the signalized intersections. Additionally, a bicycle lane was

provided adjacent to the travel lanes of the roadway. These improvements provide a more user friendly environment for pedestrians and bicyclists, where there had previously been no facilities for their use.

STREETSCAPE

The project team developed plans to enhance the aesthetics of the project corridor. The project includes landscaped medians, along with trees lining the roadway between the curb and the sidewalk. Decorative walls were designed at three locations along Morse Road, at the I-71 interchange, and at

the intersection of Karl Road and the intersection of Cleveland Avenue. Decorative street light poles, signal mast arms, banner poles and street sign supports were provided throughout the project limits to create a coordinated, aesthetic theme for the corridor.

UTILITIES

ms also investigated the location of the many underground utilities and developed accurate utility mapping. These significant components reduced the potential for conflicts among the proposed improvements. Level B subsurface utility engineering

services were used to determine existing locations. The project also includes the installation of new utility poles near the right-of-way in order to consolidate the overhead utilities and visually open up the Morse Road corridor.

RIGHT-OF-WAY

ms completed preliminary plans for necessary right-of-way acquisition. To advance construction of the project, the limits for permanent right-of-way were determined at a preliminary stage. Legal descriptions and individual plats were written.