



Interstate-71 & MLK Interchange

CASE STUDY

Hilltop Companies recognized by Slag Cement Association for I-71/MLK Interchange Project

Hilltop delivered over 40,000 yards of concrete ahead of schedule for complex project

CHALLENGE: The objective for the Interstate-71 (I-71) and Martin Luther King (MLK) Interchange project was to expand access to I-71, increase ambulance response time, improve travel conditions, and provide an economic boost to support job growth through better interstate access. It was an \$80 million project that started in 2014 and was completed in 2017.

This was also one of the first projects based on the new Ohio Department of Transportation (ODOT) spec book, which changed materials and design requirements dramatically for projects like this. It was a typical ODOT project, with unusual start times (starting at 8pm and pouring all night), large pours (up to 1,000 yards per pour) and restricted access for trucks. Kokosing Construction Co., one of the largest contractors in the Midwest, was the construction contractor responsible for the project.

SOLUTION: Kokosing chose Hilltop Companies as the concrete supplier for the project. In total, Hilltop provided close to 50,000 yards of concrete for this large project, including both ready mixed concrete and flowable fill.

Hilltop was chosen due to its history of providing quality and consistency, and a history of working collaboratively on complex projects.

APPROACH: Kokosing, Hilltop, and Geotechnology (environmental engineering) all collaborated with ODOT on this multi-year project to ensure that every phase ran smoothly. Hilltop brought their expertise in materials to the project. One application being the use of flowable fill for stabilization of soil and back fill for pipes. This material is self-leveling, and self-compacting. "It doesn't have to be compacted like aggregate or soil, which cuts down on labor and product, and is faster and provides cost savings," stated Brett Deters, Quality Manager for Hilltop Companies. Hilltop's concrete knowledge also played a part. "The bridge over I-71 needed a special mix designed for



Situation at a Glance

- The ODOT I-71, Martin Luther King (MLK) Interchange project was undertaken to spur economic development through better interstate access.
- The project called for over 40,000 yards of concrete, with unusual start times, large pours and rigid timelines.
- Hilltop Companies was chosen due to their ability to handle highly complex projects.
- Hilltop Companies received recognition from the Slag Cement Association (SCA) as part of their 2017 Project of the Year Award for its work on the project.

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CASE STUDY

the decks on the overpass bridge, including a corrosion inhibitor, low permeability, and substantially durable design for maximum life efficiency," explained Deters.

RESULTS:

The project was completed on time, in spite of significant complexities that the team overcame. The timing was met primarily based on the Hilltop team's ability to provide high quality Ready Mixed Concrete on a rigid schedule and in difficult circumstances.

In 2018, Hilltop Companies was acknowledged by the Slag Cement Association (SCA) for exemplifying the versatile applications and durable benefits of slag cement.

The recognition from the SCA states, "MLK and I-71 Interchange, Cincinnati, OH—This Ohio DOT project included slag cement to meet the project mixture requirements for permeability, meet seasonal set-time considerations, and provide brighter roadways. Out of more than 25,000 yards of concrete (with 30% slag cement included), the project had no low breaks or testing failures. All mixtures achieved the strength, air, and permeability requirements."

Thanks to this project, which provided a second entrance into the University of Cincinnati (UC) and "Hospital Corridor," development is growing in this area, spurring economic development as well as greater access to the area.



Martin Luther King Bridge



Birdseye view of Interstate 71 and Martin Luther King bridge plans.



Concrete being poured at Interstate 71 and Martin Luther King off ramp



I-71 and Martin Luther King Interchange

