

# Lewis & Clark Viaduct

Kansas City, Kansas

## HISTORY

The Lewis and Clark Viaduct is a series of 9 bridges serving the I-70 corridor across the Kansas River, connecting Kansas City, MO and Kansas City, KS. The Kansas Department of Transportation (KDOT) completed a study to examine the condition of each of the 9 bridges and developed a priority phasing plan for rehabilitation and/or replacement of the existing bridges. The westbound I-70 bridge was chosen as the first bridge to be replaced.

## PROBLEM

Repairs of the bridge were costing the KDOT upwards of \$1 million annually. While the bridge never posed a safety issue, repairs were being made to sections of the bridge that were damaged by weathering, such as the bridge deck, joints and abutments, and elements of the substructure, such as the piers.

At the westbound I-70 project site, there were many constraints to the bridge replacement, including a water treatment facility that made for drilling challenges, a local airport, railway, and environmental restrictions when working in and around the river. The work site was very tight, with nearby businesses and parking lots needing to be accessible, so a laydown yard was developed to assist in the gathering of materials.

## SOLUTION

American Bridge Company was awarded the multimillion dollar contract for this project. They partnered with Nucor Skyline for their steel needs. Nucor Skyline produced approximately 2,500 tons of HP 12x74, ranging in lengths from 50-70'. These were used as the basis of the pier footings on each of the 19 piers needed for the new structure. Nucor Skyline also produced about 800 tons of



Very tight working conditions required a laydown yard for the steel products to be easily accessed. (Photos courtesy of American Bridge)



H-piles driven to depth for pier footings of the new westbound I-70 bridge, part of the Lewis and Clark Viaduct in Kansas City, KS (Photos courtesy of American Bridge)

CASE STUDY

## Lewis & Clark Viaduct

78" ID x .625 steel casings in lengths from 25-88' and approximately 200 tons of PZ 27 sheet piles, that were used as temporary cofferdams in the dewatering process of the pier footing construction.

All of the Nucor Skyline products were produced in the United States and were trucked to the laydown yard, beginning in March 2018, to be easily accessed by crews as work began on the substructures. One of the 19 piers is in the river, and barges were used to help with the installation of this pier.

The project is slated to be completed in Spring 2020, and will be open for traffic shortly thereafter.

### PROJECT PARTNERS

Owner

Kansas Department of Transportation

Contractors

American Bridge Company –  
Overland Park, KS

### PRODUCT

H-Piles: HP 12 x 74 (2,500 tons)  
Pipe Piles: 78" ID x .625 (800 tons)  
Sheet Piles: PZ 27 (200 tons)



*Nucor Skyline produced 800 tons of 78" ID x .625 steel casings for a pier on the westbound I-70 bridge.  
(Photos courtesy of American Bridge)*