

October 9, 2018

Bad Grades. Good Roads.

IA 136 (Johnson Street NW) Reconstruction - Cascade, Iowa

Since the last ice sheets retreated, the North Fork Maquoketa River has flowed out of northern Dubuque County, IA and then meandered slowly and generally southward for about 100 miles. Considered one of the best smallmouth bass and trout fisheries in the state, it flows past the small city of Cascade before it empties into the Mississippi. For the thousands of years it's been flowing, the river has flooded regularly with the most memorable event being the historic flood of 1925.



WHKS has a long history with improvements on Johnson Street NW, including major storm sewer updates in 2001 and the entrance/site design for the Cascade Junior-Senior High School.

While thousands of years of regular flooding deposits great soil for farming, it also creates poor, unstable conditions on which to build roads. Johnson Street NW, which is also IA State Highway 136, runs right through downtown Cascade and when the City set out to reconstruct it, the poor soil conditions laid down by millennia of river flooding created challenges for the WHKS design team.

Used to being tested like this, the engineers specified additional layers of rock to stabilize the roadbed and a layer of geogrid, a synthetic mesh that is often used to reinforce unstable soils under roads and highways.



The improvements required extensive coordination with the Iowa DOT. A traffic control plan was developed to detour IA 136 traffic.

Soil conditions weren't the only challenge. Cascade High School as well as a number of local streets are only accessible from Johnson Street and the engineers assisted the contractor in finding innovative ways to schedule construction activity so access could be maintained.

Between the City that owned and coordinated the project, the State of Iowa that provided funding, the WHKS engineering team and the contractor, a set of challenging conditions were turned into a safe, convenient and well-built road.

