Fairfax Drainage Pump Station Equipment Replacement

CLIENT

Wyandotte County

LOCATION

Wyandotte County, Kansas

PROJECT DESCRIPTION

The Fairfax Levee is part of the Fairfax Drainage District in Wyandotte County, Kansas. The system protects all businesses that operate in the district boundaries including a major General Motors assembly plant. The control system is designed to monitor and control a total of 43 pumps in eleven pump stations. The pump stations receive water from storm drainage and pressure relief wells located on the land side of the Fairfax Levee.

During high-river levels, the pressure relief wells discharge into a system of collection headers that transport the flow to the pump station wet wells. The pumps operate to empty the wet wells. Without the pressure relief wells and pump stations, the levee could fail during high river levels. There is also a radio frequency (RF) network monitoring eleven remote pump stations sending constant information to the district office to monitor.

B&M SCOPE OF WORK

Black & McDonald (B&M) was contracted by Wyandotte County to complete all requirements for the Pump Station Electrical Equipment Replacement project. In addition to self-performing all of the electrical work, B&M assumed the role of the General Contractor allowing the customer to work with a single source provider. The technicians removed all the existing switchgear, pump feeds, service feeds and the Motor Control Center. B&M relocated the 2400 V transformer and 480 V distribution equipment as well as installed all new switchgear, Motor Control Center, service wire and pump feeds. B&M installed and connected all the automation and controls.

BENEFITS TO CLIENT AND PROBLEMS SOLVED

One challenge was the concrete work on the ground floor made access to the structure difficult in that the technicians had to use the roof access until complete.

B&M provided the owner with a coordination and Arc Flash study. Upon completion, B&M provided training to the owners and users. B&M continues to support the client's needs including future Arc Flash studies.