Rolling Hills / Laurel Wind Farms

PROJECT DESCRIPTION

Vibro Stone Columns To Support Wind Turbine Foundations in Iowa

In the Summer of 2011, Subsurface Constructors spent a considerable amount of time in the cornfields of Iowa. Mortenson Construction hired Subsurface to design and install a stone column/aggregate pier ground improvement solution to support 110 of 245 wind turbines on two wind farm projects. The Rolling Hills Wind Farm is a 193 turbine, 444MW project and the Laurel Wind Farm is a 52 turbine, 120MW project.

Subsurface Constructors' stone column design consisted of 65 to 80 stone columns at each turbine location for a total of roughly 8,800 stone columns. Subsurface used the dry top feed installation method for the stone columns and performed static load testing at several turbine locations to verify the load-carrying ability of the columns.

PROJECT TEAM

Location:
Massena, IA
Laurel, IA

Geotechnical Engineer:
Barr Engineering .

General Contractor:
M.A Mortenson

Ground Improvement Design/Builder:
Subsurface Constructors, Inc.