



# CORPORATE PROFILE



# A BIT ABOUT US

IDEAL Manufacturing, Inc. is a leading manufacturer of large capacity helical piles and anchors for new foundation support and existing foundation underpinning.

IDEAL holds the International Patents for the proprietary STELCOR Drilled-In Displacement Micropile.

The IDEAL Group of companies has evolved from three generations of experience in building design and construction. We have been manufacturing since 2004 with an enduring commitment to excellence in every aspect of our market. Having manufactured and installed thousands of deep foundation elements, IDEAL Manufacturing has gained indispensable knowledge of the deep foundation industry.

We are recognized most for “Excellence in Customer Support”, value-added engineering, timely delivery, innovative custom products, competitive pricing, and a comprehensive product range.

IDEAL products are produced by highly skilled and certified welding technicians in our 60,000 sq. ft. ISO –9001 certified factory. Our energetic team has “custom- build” capabilities for your specific project needs.

All day, every day, IDEAL has well-trained, experienced, and responsive staff available to assist you with all of your urgent needs.

There are currently three Ideal locations; two in New York which serve the US and Eastern Canada, and another in Calgary, the base for our Western Canadian market.

We continue to rapidly grow and currently supply product in many parts of the world including the United States, Canada, Puerto Rico, Haiti, Barbados, Guatemala, and Morocco. It is our mission and commitment to lead the industry in helical pile design, installation, and client service.





# TRADE NAMES

**iDEAL**

IDEAL MANUFACTURING, INC.

**iDEAL**

**FOUNDATION  
SYSTEMS**

**iDEAL**

Group



# LOCATIONS



## OFFICES+TRAINING FACILITY

- Located in Rochester, NY
- 4 acre site
- 3,500 square foot of office space
- 8,500 square foot training facility



## MANUFACTURING PLANT+YARD

- Located in Webster, New York
- 11.5 acre site
- 63,000 square foot production and distribution facility
- 5 acres of product staging area.



## DISTRIBUTION FACILITY

- Located in Calgary, AB
- Stock site supplying the Western Canadian Provinces and the Western United States.



# PRODUCTS+SERVICES

## PRODUCTS

- A very marketable product line
- Always competitively priced
- Comprehensive product range
- Highest capacity production helical pile in the United States
- Highly skilled and certified weld technicians
- Custom build capabilities for your specific and unique project needs
- Grouted and customizable pile configurations
- Independent laboratory testing reports for every order of steel
- Highest quality underpinning bracket in its class  
(see patented Counterforce assembly)
- STELCOR Drilled-In Displacement Micropile – IDEAL is the world's only manufacturer of this revolutionary product.

## SERVICES

- Customer Support
- Value engineering
- Installation Class/Field training
- Industry-specific business advice
- Fast delivery of all products
- Excellent Custom Products
- Certified & Skilled Installers

## SUPPORT

A well-trained, experienced, responsive staff is available to assist you all day, every day.

# QUALITY + CARE

All IDEAL Foundation Systems products undergo a quality control inspection, are labeled, and then properly palletized and packaged.

We believe that attention to every small detail makes the biggest difference when it comes to customer satisfaction and safety.





# TIEBACKS

## PROJECT

IDEAL has developed specialty tie-back pile solutions for large soil retention projects. On this project a 17' tall X 240' long retaining wall needed to be installed from the top down so that a new 5-story building could be constructed within 20' of the existing structures. With the state-of-the-art CounterForce Underpinning System, CMI Structural Solutions supported the foundations of the existing buildings. To provide vertical support for the wall, 5.5" X 20' helical piles were installed. The soil was then excavated down in front of the piles approximately 4' at a time. Pressure treated lagging was attached to the piles; then the helical tieback anchors, all thread adapters, and steel whalers were installed. Each anchor was then "locked off" at a specified load to permanently retain the soil.



# CLEAN ENERGY



## PROJECT

The 300 MW Blackspring Ridge Wind Project, located in Vulcan County, Alberta (50 km north of Lethbridge), will be the largest wind project in Western Canada when operational. EDF EN Canada and Enbridge will each own 50 percent of the project, which represents the largest investment in wind energy in B.C. at approximately \$0.6 billion. It is comprised of 166 Vestas V100-1.8 MW wind turbines and will reach commissioning in mid-summer 2014.

## DESIGN

The pile design had to account for high lateral loads and bending loads. The structures to be erected on the piles included lightning masts, dead end monopoles, overhead bus equipment, and capacitors, to name a few. Pile shafts of 7" and 13 3/8" were selected, each with a combination of single or double helices, 24" and 30" in diameter.





# PIPELINE SUPPORT



## PROJECT

This pipeline had failed and needed foundation support. Rather than using auger cast piles, the engineers at the Ideal Group offered a brilliant alternate design to achieve the ultimate capacity of 25 kips in the poor soils. They met the specs with a 3.5' .300 wall pipe that was equipped with a triple-helix configuration of 10/12/14" x 3/8" thick. All of the 432 piles that were installed met a final minimum torque of 4,500 ft-lbs or a maximum torque of 12,000 ft-lbs. Each pile shaft was inclined at an angle ranging from 0 – 4 degrees from vertical. The piles were all capped with a fully customized pipeline bracket that worked perfectly for the needs of the project. The piles were installed using a CAT Street Excavator and a small 12,500 foot-pound drive motor. This demonstrates IDEAL's unique ability to meet the specific and highly challenging requirements often encountered in custom designed projects.



# HYDRO/CELL TOWERS



## PROJECT

A pile foundation was required for a new 36M communication tower. Soils at the site consisted of very weak inter-bedded layers of sands and silt that extended to depths beyond 40 meters. The foundation design included an arrangement of friction piles and end-bearing piles in order to gain maximum capacities in the weak soils at shallow depths. This resulted in lower costs. A combination of torque-derived capacity (from the helices on the lead section) and bonded length (from the 8-inch diameter grout column) was used to achieve the design loads required. A 2 7/8" STELCOR pile was selected for this project. An EX75 excavator equipped with a 20,000 ft-lb drive head was used to install the piles to an average depth of 55 feet. An ultimate capacity of 110 kips was obtained at each location.



## PROJECT

BC Hydro designed the concrete foundation for a new communication tower at the Bear Mountain substation. IDEAL provided a pile design to meet the loading requirements. The design was also required to accommodate ad freeze forces from frost heave. The soils consisted of clays over clay till. A total of 15 piles were installed at 32,000 ft-lbs to an average depth of 10M using a 40,000 ft-lb. drive head on a 138 excavator. An electronic torque transducer recorded the install torque data. The pile selected was a STELCOR 5.5" central shaft and a 12" grout column. Each pile had ULS compression loads of 171 kips and 184 kips ULS tension loads. Four tension tests were completed.

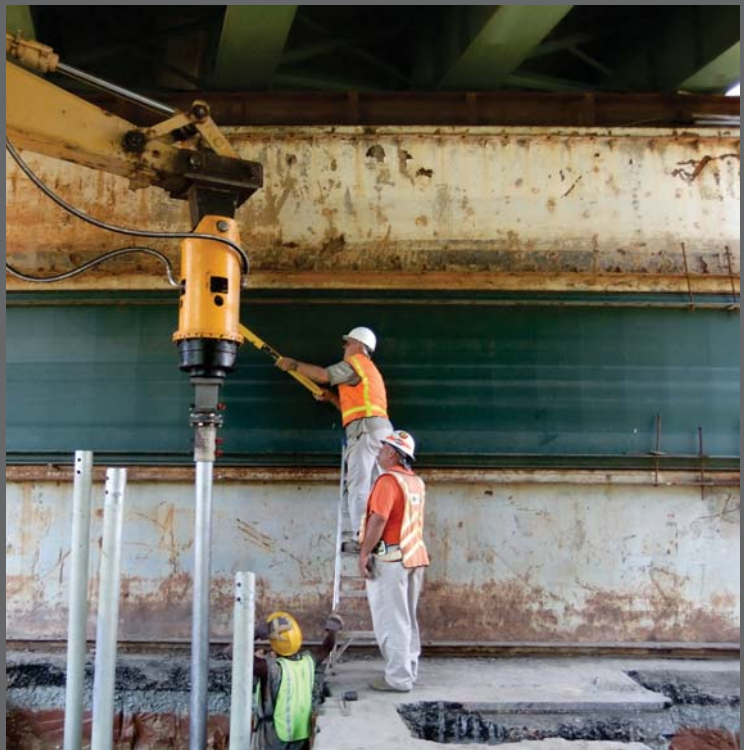


# BRIDGE REHAB

## PROJECT

This South Carolina DOT Bridge at Interstate 77 and State Route 901 is a long, single-span bridge. Traffic had increased in frequency and weight over the years, causing significant structural stress and resulting in extreme deterioration. The solution to the problem was to add a center span bridge bent support.

Headroom beneath the bridge was an issue and the solution was twenty-one 5" Ideal helical piers in each bent foundation. The piers ranged in depth from 30' to 80'. A load test was successfully performed on each foundation in both northbound and southbound lanes. The project was completed well within schedule and budget.





# RAILROADS



## PROJECT

ECI was contracted by Dead River Company to construct the foundations for three 60,000 gallon propane storage tanks. Each tank foundation consisted of a 45'L x 8'W x 3'H pile cap supported by eight 75 kip capacity STELCOR piles installed to 35'. STELCOR piles are drilled-in displacement micropiles which are installed by advancing the piles with a rotary drive motor. The lead section of the STELCOR pile has a screw head that advances the pile and compresses the soil around it. The shaft of the pile has a smaller diameter reverse auger that acts as a conveyor to push grout downward as the pile advances. The grout is added at the top of the borehole behind the screw head.



STELCOR piles were required for this project due to the loose soil conditions which were unsuitable for supporting the heavy loads. Piles for this project were battered at 1H:6V to resist both vertical gravity loads and lateral wind and earthquake loads. Due to the very poor soil conditions on site, STELCOR piles were the ideal cost-saving solution for supporting these heavy loads in shallow depths.





# UNDERPINNING

## PROJECT

Built into the side of a mountain in a beautiful setting, the colonnade on this SUNY Alfred State University building was settling. There was also a real potential for soil movement down the mountain. Due to the loads and the lateral concern, a 7" diameter helical pile was chosen for underpinning each of the columns. After placement, the 1200 pound underpinning brackets were tied into the footing with rebar and concrete.

At a later date, there was a need to excavate approximately 15' down next to a column. The lateral strength of the 7" helical piles allowed that excavation to proceed with no concerns for movement.





# BOARDWALKS



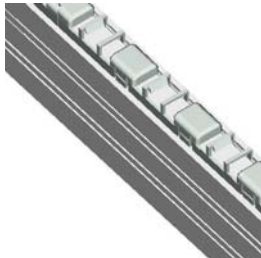
Greenwalk is a highly engineered, modular, zero-maintenance boardwalk and deck system that was designed to allow for almost instant deployment over wetland areas while causing virtually no environmental impact in the area. The Greenwalk system from IDEAL has seven patents pending.



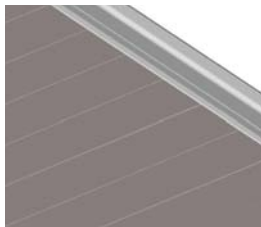
**POSITIVELY** the strongest header to joist connection. Does not rely on nails through joist hangers into end grain.



**ADJUSTABLE** galvanized steel brackets are fully articulated to allow for maximum flexibility in difficult installation areas.



**PATENTED** decking attachment system with strong, positive connection. No nails or screws through finished surfaces. No rusting fasteners, surface splitting and countersink holes.



**SUPERIOR QUALITY** greenwalk™ decking is not a composite. It is a highly engineered non-porous polymer that will not rot, chip, or fade.



**STRUCTURAL RAILING** system with maintenance-free aluminum members. Limited liability with lateral loading rated at 1200 lbs.



**SPEEDY INSTALLATION** and minimal ground disturbance means you can get the necessary approvals quickly because of less on-site exposure to liability as well as a very “green” friendly product.



**ALL ALUMINUM** structural framing and railing members. 1000PPSF rating. For consistently strong and positive connections at critical points in the framing with no possibility for poor workmanship.



We look forward to working with *you*.

