



5101 Boone Avenue North, Minneapolis, MN 55428
 Phone: 763-536-9132 *866-536-0606 *Fax: 763-536-9102
www.helicalanchorsinc.com

Project Overview:

Project Name & Location:	Plazoleta Tortuguero, 4 Esquinas Station, Tortuguero National Park, in Caribbean. Central America
Project Date:	August 2020
Project Type:	Helical pile deep foundation for a reticulated mezzanine slab elevated 3.5ft above ground level, for the visitor's center at Tortuguero National Park
Helical Pile Installation Contractor:	Pilotes Helicoidales C.R. S.A.
Structural Engineer:	Miguel Cruz y Asociados Ingeniería Estructural LTDA.
General Contractor:	REYCO Recubrimientos y Construcciones S.A.
Helical Pile Specifications:	(31) 3.5" Round Shaft galvanized helical piles, 14ft deep, 25.5 Kip ultimate compression capacity and 20.0 Kip ultimate tension capacity. (48) 3.5" Round Shaft galvanized helical piles, 19ft deep, 49.0 Kip ultimate compression capacity and 41.0 Kip ultimate tension capacity.
Soils & Embedment Depth:	Loose to dense clayey sands with water level at 2.3ft below ground level. Pile cap 3 ft above ground level.
Project Timeline:	5 days
Helical Pile Manufacturer:	Helical Anchors Inc. - MN

Key Benefits:

The galvanized helical pile alternative was cost effective against the original design of driven pipe piles, which would have needed to be treated against corrosion because of being installed near the channels in areas with a high probability of flooding. Another key benefit of the helical piles being the most appropriate solution was the limited access to the site (transportation via barge and challenging navigation through multiple river channels and access through an existing metallic gantry). The superficial soil was so poor in bearing capacity additional metal plates and wood were required for the mobility and positioning of the installation machinery, in this case a back hoe.





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