

## Helix Application – Replacing Rebar

### Heavy Loads at an Environmental Waste Facility

An outside ramp designed for heavy truck loading in a hazardous waste area was specified with concrete at 16" thick with #6 bar spaced at 9" top and bottom and 6-6-6-6 mesh in the middle. Helix was used to replace all the rebar and mesh saving the customer 43% on their material and installation costs alone. The installation of the concrete, which required the crew to wear Hazmat Suits, was completed in only one day; instead of the 3-4 days it would have taken with rebar.



The following table shows the performance advantages of Helix on this job.

Heavy Load Concrete at an Environmental Waste Facility	Peak Load (kip-in)	Structural Capacity (kip-in)
16" Plane Concrete	1484	0
16" Concrete with #6 bar at 9" OC TB, plus 6-6-6-6 mesh middle	1484	522
16" Concrete with 50 lbs/yd of Helix	2706	555

Like rebar, Helix is made from steel. And just as increasing rebar size increases strength, so does adding more Helix. Unlike rebar, which only adds strength after the concrete has cracked, Helix works together with the concrete to provide both higher first crack strength and structural strength throughout the concrete in all directions.

With rebar, you spread out the reinforcement with multiple pieces rather than using just one thick piece. Helix takes it one step further and is mixed throughout the concrete distributing the tensile resistance completely through the entire section, making it even more efficient.

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