

PROJECT SPOTLIGHT

National Parks Service building gets world's 18th LEED gold rating

Surpassing its initial goal of a silver Leadership in Energy and Environmental Design (LEED) rating, the Carl T. Curtis Midwest Regional Headquarters of the National Park Service in Omaha, Neb., became only the 18th building in the world to achieve a gold certification through the United States Green Building Council's LEED program and was the first LEED-certified building in Nebraska in July 2004.

The 22,000 ft² (2000 m²) of precast concrete supplied by Enterprise Precast Concrete Inc. helped the building receive the points necessary for the LEED gold certification:

- The precast concrete was a local product with local materials and was produced within 500 miles (300 km) of the jobsite.
- Recycled steel was used for all welded-wire reinforcement and reinforcing bars that went into the precast concrete.
- Neither the site nor the pre-casting plant had overages.
- Precast concrete helped reduce site disturbance.
- Insulated wall panels create a greater *R*-value.
- Because the backs of the panels were finished, no paint was needed on the interior walls.

The National Park Services notes that 59.8% of the construction waste was diverted through its waste-management plan and 12.8% of the total building materials by value contain recycled materials.



The Carl T. Curtis Midwest Regional Headquarters of the National Park Service in Omaha, Neb., finished in July 2004, received a gold Leadership in Energy and Environmental Design (LEED) certification and was the first building in Nebraska to be LEED certified. Photo courtesy of Colm Breathnach.

The building's sustainable attributes go beyond LEED with its long life cycle. Situated on the Missouri River in Omaha, the National Park Service building encounters harsh conditions that are mitigated by the durability of the precast concrete.

Precast concrete also allowed the \$8.5 million project to be erected during a Nebraska winter without the significant heating costs that would be typical of construction with many other materials.

The Carl T. Curtis Midwest Regional Headquarters has received a slew of awards, including the 2007 AIA Nebraska Architectural Honorable Mention Award for Design Excellence/Sustainable Design, the 2006 Closing The Circle Award for Sustainable Design/Green Buildings—Civilian from the White House, the 2006 Award for Engineering Excellence from the Nebraska Society of Professional Engineers, the second place for Excellence in Design (Government—State, Federal, Local Category) in 2005 from *Environmental Design + Construction* magazine, the 2005 Environmental Award for Sustainable Design/Green Buildings from the U.S. General Services Administration, and the 2005 Environmental Achievement Award from the U.S. Department of the Interior.

From the offices in its new award-winning building, the National Park Service oversees a 13-state region, serving as a visitor center and headquarters for Lewis and Clark National Historic Trail oversight.

—Sources: Enterprise Precast Concrete Inc., Leo A. Daly, U.S. General Services Administration, United States Green Building Council, and *Focus* newsletter



The fast-tracked Tripointe Plaza Garage in Tampa, Fla., is being erected in a small, tight location. Photo courtesy of Coreslab Structures (TAMPA) Inc.

Precast concrete speed replaces CIP in parking structure

Precasters know that their product can be used to rapidly erect structures, but the Tripointe Plaza Garage in Tampa, Fla., stands out as an exceptional example of this speed. The mixed-use parking structure was drawn to be constructed with cast-in-place (CIP) concrete and was later converted to precast concrete.

Richard Roder, president of CMT, the owner and general contractor, says that precast concrete was chosen over CIP “in order to successfully complete the garage in a very short time frame while taking into account the likelihood of adverse weather.”

This switch from CIP to precast concrete is made frequently, but what sets the Tripointe Plaza project apart is the speed with which it was done on a very tight site.

“The location of the garage is in a very tight location in the corner of the property. This required Coreslab; their erector Precon; and the program manager/general contractor, CMT, to work out a delivery and lift schedule that was very exacting. Two sides of the garage are bordered by high-tension power lines, which was an added constraint,” Roder says.

After Coreslab Structures (TAMPA) Inc. was given the notice to proceed on the project for the 410-car parking structure on March 3, 2008, it finished drawing, approvals, production, and erection by June 9, 2008. The total project, which had 100% CIP construction documents submitted for permit, was converted and completely finished in 14 weeks. It typically takes that long just to get the project drawn and approved.

“We sent our first submittal to the general contractor on Friday the week of March 3rd, which is the week we were released. That is unheard of,” says Mark McKenry, sales manager for Coreslab Structures (TAMPA) Inc. —Source: Coreslab Structures (TAMPA) Inc.

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Precast concrete used in the Tripointe Plaza Garage

Type	Number of pieces	Quantity
12 ft × 26 in. pretopped double-tees	185	117,563 ft ²
24 in. × 28 in. exterior columns	10	651 ft
24 in. × 24 in. interior columns	14	435 ft
10 in. shear walls	30	11,356 ft ²
8 in. non-load-bearing spandrels	28	992 ft
8 in. load-bearing spandrels	32	1147 ft
35 in. × 40 in. inverted-tee beams	4	89 ft
31 in. × 40 in. inverted-tee beams	8	355 ft
Stairs with landings	23	515 ft
8 in. flat slabs	13	2456 ft ²
8 in. wall panels	54	18,483 ft ²
10 in. wall panels	16	5181 ft
8 in. filler panels	41	410 ft ²
Curbs	176	1056 ft

Note: 1 in. = 25.4 mm; 1 ft = 0.3048 m; 1 ft² = 0.0929 m².