

## LESS CONGESTION, LESS WORRY AT JEFFERSON REGIONAL MEDICAL CENTER



Carl Walker Construction is building a new parking structure to meet the growing demand at **Jefferson Regional Medical Center** in Pittsburgh, Pennsylvania. The garage will provide 535 spaces for patients, visitors, employees and staff.

Working under a \$8,319,000 contract, CWC is constructing a five-level, cast-in-place, post-tensioned concrete parking

structure, as well as an access road from the lower parking lot to alleviate congestion. The project is scheduled for completion in December 2006. **Bill Fullerton, of WTW Architects**, who designed the parking structure, said it will complement, and be consistent with, the architecture of the medical center. Exterior wall openings will suggest the presence of windows, and a brick base around the building will further tie the garage to the character of the medical center.

Another goal in the design was to provide room and comfort for those using the garage. "When someone is driving an elderly parent to the medical center, they have more important things on their minds than whether they can fit into a space," noted Fullerton.

The garage will provide 8 feet of headroom clearance, roomy parking bays, a gentle 2.3% ramp slope, two-way traffic flow, and perpendicular parking. The idea is not to cram in as many parking spaces as possible, but to provide adequate parking, improved traffic flow, and optimum convenience and comfort to those using the garage.

## NEW PARKING GARAGE TO ACCOMMODATE WASHINGTON CROSSROADS PROJECT

The **Urban Redevelopment Authority** of Washington, PA, has contracted Carl Walker Construction to design and build a new \$12-million parking garage to accommodate the **Crossroads Project** — a \$100 million mixed-use redevelopment of a 14-block area known as the City of Washington Central Business District.

Construction of the 850-space parking garage began in April 2006 and is slated for completion in February 2007, in time for the opening of the Crossroads Project.

The structure is being built with precast, prestressed concrete and will feature architectural glass and brick towers, in keeping with the architectural style of the other buildings.

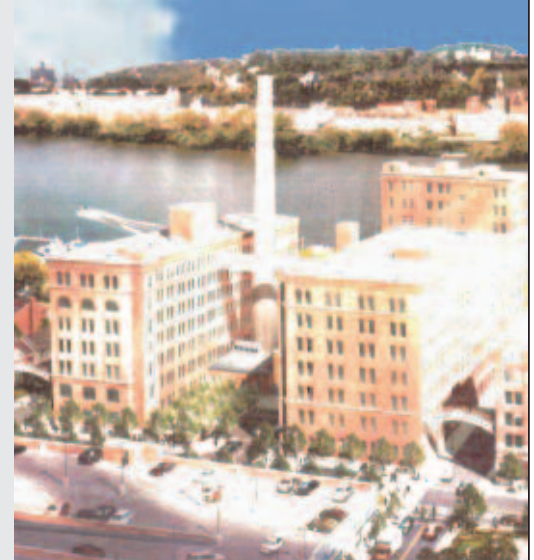


## NEW PARKING STRUCTURE FOR CORK FACTORY

Originally constructed in 1901, the landmark **Cork Factory** in the Strip District of Pittsburgh, Pennsylvania is being converted this summer into 295 loft apartments. To accommodate tenants and visitors, Chicago-based developer **McCaffery Interests** has contracted Carl Walker Construction to build a parking structure on a nearby lot.

The new three-level, mixed-use parking structure will provide 126,000 square feet of parking area to accommodate 427 cars on the second and third levels and 60,000 square feet of retail space on the ground level. Using precast, prestressed concrete elements, CWC will be able to complete the project in time for the opening of the Cork Factory lofts November 2006.

CWC was awarded the contract on the basis of value engineering suggestions that called for the use of precast concrete, significantly reducing the cost of the project.



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## NOT JUST A PRETTIER FACE: STANWIX STREET GARAGE GETS MUCH-NEEDED ATTENTION



Carl Walker Construction recently completed the demolition of an outmoded eight-story, cantilevered exit ramp at the **Stanwix Street Parking Garage** in downtown Pittsburgh, Pennsylvania and carried out related structural and cosmetic concrete repairs. Under a separate contract, CWC is in the process of making ongoing repairs to that structure.

The parking structure, which occupies levels two to ten of the 625 Stanwix Street Tower, was built in the 1960s. **Shane McCartney**, project manager for Carl Walker Construction, explained that at the time the building was constructed, building codes allowed construction of cantilevered exit ramps, which enabled cars to exit quickly due to the placement of the ramp on the outside of the structure. However, time has shown that this type of exit ramp has serious drawbacks, and building codes are much more restrictive today due to safety issues.

“Such cantilevered ramps, because they are outside the building, are constantly exposed to the elements, explained McCartney. “Also, because every car that entered had to leave via the exit ramp, continual stress and much road salt further increased the already high maintenance concrete structures typically require.”

Additionally, the ramp did not serve to increase the owner’s return on investment, since it required continual maintenance yet provided no additional parking spaces.

In 2001 **InterPark**, of Chicago, IL, acquired the garage and, in a proactive move, decided to stop use of the ramp due to potential safety issues. Cars were rerouted through the interior of the structure, and CWC placed safety netting around the ramp.

Under the \$778,245 contract, CWC removed the structural elements from the 250-foot-long Stanwix Street side of the building. The ramp was approximately 70 feet high at the south end of the garage and 30 feet high at the north end. Parapet walls were added where the old exit openings existed, and the exterior received cosmetic patching and refinishing.

Working on a fast-track schedule, CWC completed the project on May 26, 2006. Under a separate contract, CWC has been carrying out other repairs, maintenance and improvement to the garage.



## RECENTLY PUBLISHED ARTICLES OF INTEREST

### PRECAST CONCRETE PARKING STRUCTURES: DURABILITY STARTS AT THE JOINTS

In the United States, a typical precast parking structure incorporates many elements — all of which are manufactured in a plant, transported to the site, and erected. Because these components must be joined together in the field, proper joint construction and detailing are crucial. This article, coauthored by CWC President **David Monroe** and Vice President **Joseph L. White**, provides jointing recommendations, with particular emphasis on joints at the flanges of double-tee elements. Read this article in the News section on [www.carlwalkerconstruction.com](http://www.carlwalkerconstruction.com).

### NEW STATE LAWS AND A NEW WAY TO SEEK BIDS ON PUBLIC CONSTRUCTION PROJECTS

Traditionally, construction projects in the public sector have relied on a design-bid-build method, awarding the construction contract to the responsible lowest bidder, based on construction documents prepared by an architect. As the design-build trend grows in the private sector, more states now have laws in place to enable the use of the design-build method of project delivery in the public sector as well.

This article, by **Lloyd Miller, President, NVisions Architects**, examines the two different approaches to seeking bids for public construction projects and offers advice as to when to use a design-build RFP and when to use a traditional design-bid-build approach. Three NVisions case studies illustrate the use of design-build for the public sector, of which CWC is included. View this article in the News section of the CWC website at [www.carlwalkerconstruction.com](http://www.carlwalkerconstruction.com).

## ANNUAL PARKING STRUCTURE COST SURVEY

Reprinted with permission from Carl Walker, Inc.'s *Industry Insights* March/August 2006

### COSTS CONTINUE TO CLIMB IN 2006

Each year at this time, Carl Walker, Inc. presents our outlook for parking structure construction costs for the coming year. To generate our forecast, we record the construction costs of the dozens of parking structures we design during the year, add them to our historical database of parking structure costs, convert them to current dollars using Engineering News Record (ENR) Cost Indices, then adjust the data to reflect regional variations in materials and labor. This allows us to more accurately predict construction costs by region of the country over time.

### EFFICIENCY BECOMING EVEN MORE IMPORTANT...

The usual measure of cost in the parking industry are cost per space and cost per square foot. Dividing these two numbers by each other produces another important standard used in the parking business: parking efficiency in terms of square feet per space. An experienced parking consultant can maximize the efficiency of a structure using expert design, thus helping to minimize the construction cost per space.

### A HIGHER RATE OF INCREASE...

It will be no surprise to those of you involved in the building industry, but the banner year in 2005 has resulted in an increase in parking structure costs predicted for 2006. Currently (March 2006), the median construction cost of a new parking structure is \$13,588 per space, and \$40.71 per square foot. This is an increase of almost 20% over the past two years. Compared to an increase of just over 15.3% in the general construction market during the same time period, the cost of parking has increased at a higher rate than the overall market. We believe this is due to recent inflation in the prices of cement and reinforcing steel, two of the primary components of parking structure construction. These numbers represent construction costs including contractor fees but do not include land, design fees and other project soft costs.

### CITY BY CITY...

Figure below shows the average cost per space and per square foot for a typical garage. The national average of \$13,588 per space was used as a baseline then adjusted using RS Means location factors for each city.

### DESIGN IS CRITICAL...

The good news? More than ever before, parking structures are receiving unique and creative architectural treatment, moving them out of the realm of plain concrete boxes. Also, they are regularly being included as an integral part of mixed-use projects, combining multiple uses with parking in a single building or complex. At Carl Walker, that's our specialty, and we are sensitive to the potential impacts we as designers can have on your projects. Give us a call — we'd be please to assist you in designing the most efficient parking facility in the industry today!

### MEDIAN PARKING STRUCTURE CONSTRUCTION COSTS

CITY	INDEX	COST/SPACE	COST/SF
Atlanta	89.4	\$12,148	36.39
Baltimore	99.5	\$13,520	40.51
Boston	115.6	\$15,708	47.06
Charlotte	76.5	\$10,395	31.14
Chicago	111.7	\$15,178	45.47
Cleveland	100.4	\$13,643	40.87
Denver	95.8	\$13,018	39.00
Dallas	84.4	\$11,469	34.36
Detroit	107.3	\$14,580	43.68
Kansas City	103.5	\$14,064	42.13
Los Angeles	106.8	\$14,512	43.48
Miami	86.6	\$11,768	35.25
Minneapolis	112.2	\$15,246	45.68
New Orleans	86.4	\$11,740	35.17
New York	131.9	\$17,923	53.70
Philadelphia	114.4	\$15,545	46.57
<b>Pittsburgh</b>	<b>100.2</b>	<b>\$13,616</b>	<b>40.79</b>
St. Louis	102.3	\$13,901	41.65
San Francisco	121.7	\$16,537	49.54
Seattle	104.2	\$14,159	42.42
<b>National Avg.</b>	<b>100</b>	<b>\$13,588</b>	<b>40.71</b>



BETWEEN THE LINES

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Whether you are considering a new parking structure project or have an existing one in need of repair or restoration —

***Carl Walker Construction can help!***

From concept to completion we have the experience, technical capabilities and personnel required to provide single-source solutions for a wide variety of parking structure project requirements.

Carl Walker can provide comprehensive construction services as:

- Design/Builder
- General Contractor
- Specialty Contractor

***Call Carl Walker Construction today for a free evaluation of your project requirements!***

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## WATER'S EDGE EXHIBIT AT PITTSBURGH ZOO AND PPG AQUARIUM

Polar bears, walruses and sea otters are not the usual types of users for Carl Walker Construction's projects. But, thanks in part to CWC, the sea creatures will soon be parking their behinds at the new Water's Edge Exhibit at the **Pittsburgh Zoo and PPG Aquarium**.

General contractor **Zambrano** subcontracted CWC because of the company's concrete expertise. Using cast-in-place concrete, CWC constructed two levels of supported deck where the polar bears can roam. When complete, the exhibit will feature three outdoor pools for polar bears, walruses and sea otters, and feature two underwater tunnels, enabling visitors to walk through and see polar bears and walruses swimming overhead. What they won't see is the important underlying infrastructure including a vertical concrete tank, a series of tanks to provide water to each individual pool, and wastewater tanks.



CWC Project Manager **Chris McElhaney** noted a particular challenge installing two overhead radius glass tunnels. CWC built horizontal and vertical support walls, each having two channels to receive the tunnels. Precision was key to ensuring stability and a tight fit. The polar bears returned to their new home in August 2006.



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**PARKING CONSTRUCTION EXPERTS**