



HIGH Standards

News From High Concrete Structures, Inc.

SPRING 2004

Sharpless Parking Garage



Location: West Chester University,
West Chester, PA

Architect: A. Stevens Krug, AIA
Engineer: Cagley, Harmon & Assoc

Congratulations to the entire team for another successful project!

The Skyrocketing Cost of Steel

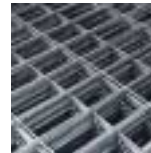
Over the last few months you've probably heard lots of groaning, gulping, and gnashing of teeth as the construction industry comes to terms with the sudden and skyrocketing price of steel, i.e., 50–80%. These steep, unexpected increases are caused by a series of unrelated events, which combined, have launched steel prices into the stratosphere with no hope of returning to earth anytime soon.

The series of events started nearly 30 years ago when the U.S. steel industry began converting from integrated mills that produced steel from iron ore and coke to gas- and electrically-powered mini-mills that produced steel from recycled scrap material. Today, most of the domestic steel used in construction is produced by mini-mills and most of the big, integrated mills are aging or idled. Also, over the last several years while the dollar was strong, we became reliant on “inexpensive” foreign steel to augment domestic supply and meet the demands of our burgeoning construction industry. The seemingly limitless supply of “inexpensive” foreign-produced steel kept domestic prices down and prevented U.S. producers from investing in new capacity, because it was uneconomic. In fact, prices were so low and things were so bad for domestic steel producers, that many of them filed for bankruptcy or went completely out of business.

More recently, a mine fire in West Virginia shut off a major and inexpensive supply of coke for the integrated mills. The effect of this disaster has been to reduce the supply of coke available for steel manufacture and increase the cost of domestic steel. At the same time, higher gas and electric prices have increased the cost of production at mini-mills.

Additionally, a weakening U.S. dollar has made purchasing “inexpensive” foreign-produced steel much more expensive. And, finally, China's strengthening economy now supports a never-ending stream of massive infrastructure and construction projects. With this turn of events they have gone from being a key supplier

of steel to the global marketplace to an insatiable consumer of foreign-produced steel and, more importantly, scrap steel—to feed their yawning mills.



This last point is especially important. China's strengthening currency, coupled with a willingness to pay astronomically high prices for scrap, has made it a more attractive market for scrap than our domestic market. So now, much of our once ample, home-grown supply of scrap steel, the essential ingredient for our mini-mills, is flowing overseas to China. The result? Mini-mill producers are facing reduced scrap supply, are paying higher prices for what they can get, and are increasing prices for what they can make.

Nearly every contractor has bid or contracted projects with steel prices that are 33–50% below today's steel costs because steel suppliers do not guarantee steel prices when a job is bid. In many cases, this is a big enough problem that contracts are “underwater”, i.e., the contractor cannot perform them without losing a substantial amount of money—or going bankrupt. So, now everyone in construction is searching for ways to save the bottom line on projects—while also preserving industry capacity by keeping contractors and other steel-using materials suppliers in business.

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Letter from the President



What is your best, most powerful Partnership? Why is this an important question? Because partnerships can help

you create a competitive advantage in today's competitive business environment.

The "new partnership" at HIGH Concrete is AltusGroup™, five of the largest precasters in the U.S. joined together to develop and launch a family of commercial and multi-unit residential CarbonCast™ precast products. The cost and effort of doing research, development and testing for CarbonCast would have swamped any single AltusGroup member, but sharing the work made it possible to do it all and do it better. It has been an amazing experience watching five different companies share ideas, solve problems, and collectively create the innovative breakthroughs necessary to build the CarbonCast line.

Now, we would invite you to partner with us in understanding the benefits of our CarbonCast Architectural Panels, Wall Panels and Multi-unit Residential System. We think that the unique features of the C-GRID™ carbon fiber reinforcing in lightweight, insulating and affordable precast products will benefit your projects in many ways. For example, a lightweight Architectural Panel could enable you to use less of the increasingly expensive structural steel, which will be a major cost saver on any project. Alternatively, a super-insulating Wall Panel could reduce energy consumption, increase occupant comfort, and contribute significantly to LEED certification.

Talk to your HIGH Concrete sales representative, Mike Achilles, Joe Sharkey, Kevin Iddings or A.J. Sassaman to learn more about CarbonCast and to discuss what we could do with these products to give you a competitive advantage in your market. After all, working closely with you to help you build a successful project is what partnering is all about.

Sincerely,

Tom McEvoy
President

A New Preventative Maintenance Program for Parking Garages

As part of our commitment to delivering "concrete innovations and answers", HIGH Concrete Structures, Inc. is expanding the scope of its services to include preventive maintenance on parking structures.

Over the years we've observed that the way a garage is maintained can significantly affect users' safety as well as its appearance, useful life, and long-term value. Common problems include dark and dirty interiors, cracked or spalling concrete caused by chloride build-up from snow management, leaking pour strips and caulking, clogged drains, burned out lamps and signs and damaged doors.

These problems, which may initially seem minor and go unattended, occur and accrue over time. And, they can be a hassle to resolve because they require hiring and coordinating multiple trades. One way to overcome them and eliminate the hassle that goes along with them is to anticipate and avoid them through a regimen consisting of regular inspections, caulk warranty enforcement, pour strip sealing, routine preventive maintenance and "as-needed" repairs for accidental damage and normal wear and tear.

To help parking garage owners avoid problems, we are offering three levels of

preventive maintenance service designed to meet owner's differing needs:

- **Basic**—available on any structure
 - Annual inspection with report, photographs and cost estimates.
 - Annual deck and drain cleaning
- **Plus**—available on most recently completed HIGH-produced structures
Same as "Basic" program but also includes:
 - Pourstrip sealing
 - Caulk warranty enforcement
- **MEGA**—available on most new or to-be-built HIGH-produced structures
Same as "Plus" program but also includes:
 - Repair of cracks and spalls not caused by external impact

Each program is available as a one-, five-, or ten-year fixed fee contract. We also offer a full range of supplementary a-la-carte, single-source services at fixed annual rates to accomplish "as-needed" repairs.

Please contact **Joe Palko** at **1.800.PRECAST** or **jpalko@high.net** if you'd like to learn more about how you can take advantage of these services to improve the safety and prolong the life of your parking structure.

Blast Resistant Precast Concrete Structures

At the urging of HIGH Concrete Structures, Inc., the Precast Concrete Institute (PCI) recently undertook an initiative to investigate further testing of precast concrete structures for blast resistant applications. It has long been recognized that concrete structures offer benefits for this type of application. This is because standard steel sections are too elegantly shaped to resist heavy blast loads. Heavier flanges are becoming prohibitively expensive and scarce as steel prices escalate and supply tightens, and the flanges of wide flange sections are trap blast pressures, causing further damage.

Concrete sections, due to their more massive cross section, normally have reserve capacity which assists in resisting blast forces. One of the avenues which PCI will explore, is the connection methodology developed for the PRESSS seismic testing. Another avenue



may be emulation of CIP concrete connections. As part of this initiative, PCI is sponsoring a Blast Resistant Workshop in Chicago on April 21, 2004. One of the foremost experts in blast resistant design, Dr. Ted Krauthammer of the Protective Technology Center, Penn State University, is participating. Dr. Krauthammer has more than 30 years of experience in this area.



Gary Graziano, AIA
Sr. Director,
Marketing & Planning

The Power of Focus

? In our last newsletter we wrote about “Catching the Next Big Wave” and how a marketing mindset can help you choose the best ones if you:

- Focus on the one or two things you can do really well.
- Define your target markets and customer group(s).
- Develop unique, valuable, branded offers for target markets and customers.
- Help your customers understand how you can help them.
- Check up on your customers regularly.

If your firm is unfocused and tries to be everything to everyone, it will be of no interest or value to anyone. You will, at best, be average—just like anybody else offering the same product or service. You will also enjoy, at best, average financial returns. At worst, you will be the firm that loses money because it does a poor job and is the firm that nobody wants to hire. So, focus is important if you want satisfied, repeat customers—and if you want to make a good profit.

In finding your focus, it is important to remember that no company has to be the leader at everything. In fact, a singular leadership focus is critical to success. Studies show that you can succeed if you are at parity with your

competition on most things and are the leader in just one area. In touring bikes, for example, BMW is widely regarded as the technology leader, yet Harley leads in providing the intangible customer experience. Both are well admired. And, both are successful.

To find—or refine—your focus, you can develop an assessment tool like the one at the bottom of this page.

Now, here’s a twist. *Your* opinion of how good you are really doesn’t matter. What does matter is what your customers and prospects think. So talk with them to find out how you really rate—and what they really want.

At HIGH Concrete, a focus on Innovation has helped us become the nation’s largest single-site architectural and structural precaster. Over the years we’ve introduced or spearheaded the development of:

- **15’ MEGA TEE™**—an extra-wide double tee that speeds erection and reduces joints in parking decks.
- **16’ MEGA TEE**—an even wider double tee.
- **MEGA-SPAN™ Building Systems**—a “total precast” solution for virtually any commercial or multi-unit residential building program
- **18” deep MEGA TEE**—a shallow double tee for MEGA-SPAN “total precast” buildings
- **Light Walls**—open, structural, centerwalls for parking garages that reduce the amount of concrete used, and make garages brighter and safer

- **“Trussed” concrete shear walls (K Wall)**—provide openness within a parking structure.
- **Seismic Solutions**—new method for connecting shear walls through the use of non-bonded post-tension strands to minimize the size of walls and provide superior seismic resistance"
- **Support**—of design and testing of girders with openings for use in office structures where mechanical systems need to pass through the girder.
- **HIGH Concrete Accessories**—patented plastic casting accessories that provide uniform openings for conduit or structural connections, and ensure solid bonding when grout is used.
- **CarbonCast™**—lightweight, insulating products reinforced with non-corrosive, epoxy-coated carbon fiber C-GRID™ for Commercial and Multi-unit Residential applications including:

Commercial

Architectural Panels, Hardwall Panels, Wall Panels, Double Tees

Multi-unit Residential

Foundation Panels, Wall Panels, Floor & Roof Decks

So, please call **1.800.PRECAST** today, or send an e-mail to **concrete.answers@high.net** to let us know how we can help you with “concrete innovations and answers.”

Type of Product/Service Leadership	Name or Describe a Leader in Your Industry	Name or Describe a Leader in Your Market	Rate Yourself*
End-use Segment Expertise			
Lowest Price/First Cost			
Lowest Overall Cost			
On-time Delivery			
Functional Design			
Aesthetic Design			
Innovation			
Customer Service			

*1= *High*—you are the trailblazing leader
5 = *Low*—you are a distant follower, struggling to keep up

Skyrocketing Cost of Steel *(continued from cover)*

Like other steel-using materials suppliers, precast manufacturers are adversely impacted by rising steel prices. Historically, and depending on the product application, steel reinforcing and connection materials have comprised 4–10% of the precast selling price. This means that a 50–80% increase in steel prices can wipe out the profit on a project, and cause it to be underwater. And, with a year’s backlog of these kind of projects, a business could quickly drown.

To stay afloat and keep project costs in line with budgets, HIGH Concrete is partnering with its steel suppliers to guarantee prices and

delivery for the coming months. We are also working on ways to minimize waste in fabrication, developing lighter-weight, carbon fiber grid reinforced products that use less steel, and reaching out to architects and engineers to re-think project designs so that less steel is used (e.g., using higher strength mixes to reduce reinforcing requirements).

Now, more than ever, with everything that is going on in the U.S.—and around the world, we all need to be thinking about, and implementing, the concrete innovations and answers that will help our projects be delivered on time and on budget.

If you’d like one of our new HIGH Concrete or CarbonCast brochures, call 1.800.PRECAST or send us an e-mail at concrete.answers@high.net

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Join Us May 6th for

**Concrete
 Innovations &
 Answers**

See inside for details!

ENGINEER'S CORNER

by Ken Baur
 Director of Research & Development

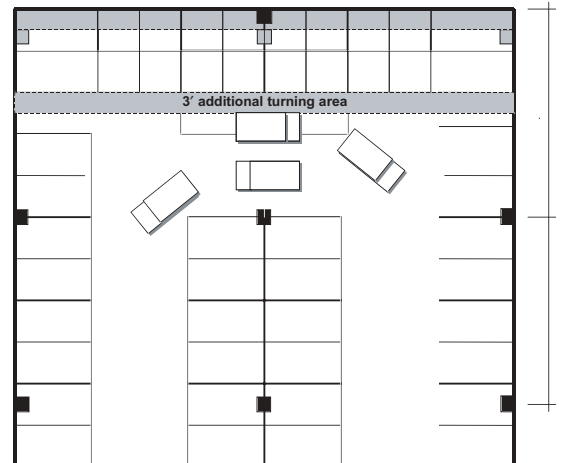
16' Wide Tees for Parking Structures
A Solution to Improve the Visibility in Turnaround and Crossover Lanes

We have recently ordered a new double tee form with variable tee stem spacing capability. The new form, an innovative HIGH Concrete design, will accommodate a 6' stem spacing for fabrication of 12' wide tees and a 7'-6" stem spacing for 15' wide MEGA TEES™. In addition, we will be able to fabricate MEGA TEES up to 16' in width on the same form. 16' tees provide a benefit in structures where a 48' column spacing is used (three 16' wide tees), and especially in the end bays where a wider 48' bay improves visibility in turnaround areas and crossover lanes for today's larger vehicles vs. a narrower 45' bay.

Our new MEGA-FLEX™ form will fabricate sturdy, slender tees up to 30" in depth to meet the demands of owners who want a shallower tee section to improve the feeling of openness within the structure or to increase headroom to accommodate SUVs and trucks.

One of the barriers we faced in bringing the 16' wide MEGA TEE to market was finding a way to ship them within the dimensional envelope allowed by DOT regulations in our market area. This is because a 16' wide MEGA TEE cannot be shipped via HIGH's standard tilt-frame transporters. So, we designed and ordered 25 special trailers to accommodate our new tee. This was a major investment, made only after two years of research and testing on the new tee and trailer design.

The first project to use the 16' wide tee will be the AIG Parking Garage designed by Ed Baum of B2 Engineering. This project will be built in New Castle County, Delaware this summer.



Parking Structure with 16' MEGA TEES at End Bays