Project Spotlight:
Charleroi Locks and Dam Project, Charleroi, Pennsylvania

The Pile Driver's Legal Corner – Collecting Your Money or, Why Some Contractors Work for Free

When the Levee Breaks: Rebuilding New Orleans

Reaching New Depths: The South Carolina Chapter of the PDCA
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Editor’s Note:
We would like to acknowledge Steve Borg of the NYSDOT as the author of “Large Diameter Cast-in-Place Concrete Piles – Whitestone Expressway Project” on page 40 of last Fall’s (Q3) issue of Piledriver.
PDCA works for all of us in the pile driving industry. PDCA committees actively work to make our industry better. These committees are:

- Communications Committee, chaired by Van Hogan, is charged with putting out Piledriver magazine and maintaining the Web site.
- The Finance Committee is chaired by Trey Ford with the responsibility for budget, cash flow, and all financial oversight.
- Education Committee chairman is Mike Elliott. This committee is responsible for organizing our two premier events of the year – the Annual Meeting and Conference and the Design and Installation of Cost Efficient Piles (DICEP) seminar.
- Environmental Committee led by John Linscott addresses environmental issues related to pile driving.
- Market Development Committee chairman Michael Engestrom and his committee work hard to develop ways to promote driven piles.
- Technical Committee, chaired by Dale Biggers, is very well-connected in the engineering world. These folks provide input on behalf of the pile driving industry to specification writers everywhere. They do a fantastic job of representing our industry. They have recently completed a thorough review of the AASHTO pile specification. Next, they are fine-tuning the specification for private industry use.

In my position as PDCA president, I see first-hand the hard work and dedication to our industry by all of our committee members. I am humbled by the realization that all of these individuals are volunteers. These fine folks are helping you and me and they are also helping themselves by having a positive impact on their chosen profession.

So, how can PDCA help you to help yourself? Working together under the PDCA banner with fellow pile driving contractors is an effective tool. This is true on the national level. But, it is also true on the local level as proven by PDCA of South Carolina. You know what needs to be done in your area. PDCA can help you to start a local chapter. All it takes is a small core group of pile driving contractors with a passion for their industry.

Our newest committee is the Membership Development Committee chaired by Rory Kelly. The strength and effectiveness of our association depends upon involved members. My theme for this year is “Growth through Local Chapters.” Rory is committed to facilitate the establishment of local chapters. I know from personal experience that PDCA involvement at the local level is a wise investment of time and energy. I am absolutely convinced that the success of PDCA of SC can be realized in other parts of the country. Again, all it takes is a small core group of pile driving contractors with a passion for their industry.

Contact Steve Hall, PDCA Executive Director, to get the ball rolling. Let PDCA help you to help yourself. Until next time, remember driven piles are tested piles.
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Leadership is the Key to Success

By Stevan Hall, PDCA Executive Director

In the months leading up to the 2006 PDCA 10th Anniversary Annual Conference in San Antonio, Texas, during the Annual Conference and my subsequent trip to PDCA of South Carolina, in Charleston, I was consistently impressed by the level of commitment, dedication, support and the positive attitude shown by the Executive Committee, Board of Directors, Committee Chairs and Committee Members and the Members themselves. Equally as important, I am convinced that your continued enthusiasm and participation will be the catalyst that advances this association into prominence as an internationally recognized authority and resource for the driven pile industry.

It all starts with leadership and I can tell you that Harry Robbins is a leader. He is a man of great vision, character, and integrity; and Harry has already immersed himself in his responsibilities as your President and is dedicated to performing his role with a passionate commitment towards excellence. Harry has a big job ahead of him, but a job he cannot accomplish by himself. He has the full support of his fellow Board members, but he also needs your support, your input, and your participation to make him the effective leader I know he can be, I know he wants to be, and you want him to be.

Leadership within the PDCA is seen on many fronts. I want to thank Mark Weisz (C. S. Marine Constructors) for his leadership as the 2005 Education Committee Chair and the remarkable job his committee did in planning the 2006 PDCA 10th Anniversary Annual Conference. I look forward to working with Mike Elliott (Pile Equipment, Inc.), 2006 Education Committee Chair and his committee members in developing the DICEP seminar in September 2006 and the 11th Annual PDCA Conference in 2007.

During the Annual Conference, the Board of Directors approved and implemented a new committee – Membership Development. Rory Kelly (Skyline Steel) is the new Chair. I told Rory that stepping up to the plate isn’t always easy, but shows great character and a commitment that sets the bar for others to follow. I am confident that Rory will do a great job in this important role. Rory’s committee currently consist of the entire Board of Directors – for who better to acknowledge the importance of membership growth and be committed to its success than those who are responsible for the fiscal management of your association. Each Board member is committed to recruiting two new members in 2006. If they succeed, the PDCA will grow its Contractor or Associate membership by 20 – not including unsolicited memberships. If each PDCA member would commit to the same obligation, we would grow the membership by 600 making PDCA an organization of just under 1,000 members. As a PDCA member, your commitment to recruiting two new members will make a significant difference in the annual and long-term success of your association. Imagine the strength and influence your association would have with a 1,000 members, not to mention the additional service and benefits PDCA could provide its members with that kind of revenue stream.

PDCA must acknowledge the significant and remarkable work the PDCA Technical Committee did on preparing revisions to AASHTO LRFD Bridge Installation Specifications, Section 4: Driven Foundation Piles. Technical Committee Chairman, Dale Biggers (BOH Brothers Construction) and his committee members are to be commended for producing a standard that will not only provide the specifications for driven foundation pile for years to come, but also significantly validated PDCA credibility with AASHTO, FHWA and other public agencies as an organization that can produce extraordinary results for the benefit of this industry. The Technical Committee is now undertaking the responsibility of converting these specifications into a Private Installation Spec for non-public owners, engineers, designers, and contractors to use.

Additional PDCA committees, such as the Market Development (Chair Michael Engstrom, Nucor-Yamato Steel), Environmental (Chair John Linscott, H.B. Fleming), Communications (Chair Van Hogan, Ed Waters and Sons Contracting Co, Inc.), and Finance (Chair Trey Ford, Ford Pile Foundations, Inc.) are all instrumental in moving the PDCA agenda forward by ensuring visibility, marketability, access to resource and technical information, and a greater market share for the driven pile industry. They are all to be congratulated on their efforts and...
commitment to making the PDCA a better organization.

PDCA is grateful for the leadership and support of the Annual Conference sponsors, exhibitors, participants, and speakers. Collectively, you made the conference a tremendous success. PDCA has a link on our Web site, www.piledrivers.org with a conference wrap up, so please visit the site for more information. If you participated, I hope the experience was beneficial and enjoyable. For those who did not make the conference, I think you missed a great opportunity. And for everyone, I hope you will join us for your association’s 2007 Annual Conference in Nashville, Tennessee.

Following the Annual Conference, I went to Charleston, South Carolina to visit with the PDCA of South Carolina Chapter Board and members. They are to be commended for their foresight, wisdom and commitment to bringing the issues of the pile driving industry to the chapter level. They are leading by example and have set the benchmark for others to follow – and I am sure others will follow. In fact, the PDCA is currently involved in the formation or potential formation of several new chapters across the United States.

Earlier I mentioned leadership and noted many who are currently serving in leadership capacities within the PDCA. I was extremely fortunate to have been in South Carolina when the PDCA chapter acknowledged two distinguished gentlemen who are well respected leaders in the South Carolina pile driving industry. Mr. Tommy Parker (Parker Marine) and Mr. Morris Fairley (Palmetto Pile Driving, Inc.) were both honored with the PDCA South Carolina Chapter Lifetime Achievement Award. This was not only an appropriate award, it was also necessary. There are many individuals and companies who have made this industry what it is today and if we fail to acknowledge them, we do an injustice to them and to our industry.

During the Annual Conference, I also had the privilege of meeting and playing a small role in presenting Mr. Charles “Chuck” C. Whiteaker, Skyline Steel (Ret.) with a token of the PDCA’s appreciation for the significant role he played in the initial formation of the association. We owe you our gratitude and heartfelt thanks for the selfless commitment you made to guarantee our success.

So to Chuck Whiteaker, Tommy Parker, and Morris Fairley, I say, “Congratulations!” You are the member-appointed dignitaries of the PDCA. We can all learn from your examples.

Finally, I want to paraphrase a quote by saying, “As association members, we need to learn to work together as brothers or perish together as fools!”

The PDCA is your association! You are its greatest asset and you hold its future in your hands. Don’t wait to see if your fellow member found their two new members, don’t wait for someone to ask you if you will serve on a committee and don’t look for someone else to do your share of the work. There are plenty of opportunities for you to promote and serve your association, and in doing so; you ensure the success of your association and your industry.

Leadership is the Key to Success
2006 PDCA Board of Directors & Committee Chairmen

Harry Robbins
President
P: (843) 577-0545
F: (843) 577-0547
P.O. Box 70986
Charleston, SC 29415
harry@palmettopiledriving.com

Mark Weisz
Vice President
P: (707) 562-4100
F: (707) 562-4106
P.O. Box 2195
Vallejo, CA 94592
mark@csmarine.com

Van Hogan
Secretary
P: (904) 268-4419
F: (904) 260-9379
C: (904) 631-8309
6467 Greenland Road
Jacksonville, FL 32258
vhogan@edwatersandsons.com

Trey Ford
Treasurer
P: (757) 497-3593
F: (757) 497-0031
4985 Euclid Road
Virginia Beach, VA 23462
fordpile@earthlink.net

Randy Dietel
Immediate Past President
P: (409) 945-3459
F: (409) 945-4318
P.O. Box 1847
Texas City, TX 77592-1847
randy@pilinginc.com

Mike Elliott
Director
P: (904) 284-1779
F: (904) 284-2588
1058 Roland Ave.
Green Cove Springs, FL 32043
info@pile-eqp.net

Garland E. Likins, Jr.
Director
P: (216) 831-6131
F: (216) 831-0916
4535 Renaissance Parkway
Cleveland, OH 44128
garland@pile.com

John Linscott
Director
P: (207) 799-8514
F: (207) 799-8538
89 Pleasant Ave.
South Portland, ME 04106
john.linscott@hbfleming.com

Rory Kelly
Director
P: (703) 978-2500
F: (703) 978-2908
5610-B Sandy Lewis Dr.
Fairfax, VA 22032
r.kelly@skylinesteel.com

John King
Director
P: (843) 763-7736
F: (843) 763-7974
4530 Hwy 162
Charleston, SC 29449
kingpiledrive@aol.com

Warren Waite
Director
P: (800) 474-5326
F: (713) 691-0089
P.O. Box 16099
Houston, TX 77222
wwaite@pileco.com

Stevan A. Hall
Executive Director
P: (888) 311-7322
F: (904) 264-9531
P.O. Box 66208
Orange Park, FL 32065
execdir@piledrivers.org

Communications Committee
Chairman: Van Hogan
P: (904) 268-4419
F: (904) 260-9379
C: (904) 631-8309
6467 Greenland Road
Jacksonville, FL 32258
communication@piledrivers.org

Communications Committee Members:
Garland Likins, Doug Scaggs, Steve Whitty

Finance Committee
Chairman: Trey Ford
P: (757) 497-3593
F: (757) 497-0031
4985 Euclid Road
Virginia Beach, VA 23462
finance@piledrivers.org

Finance Committee Members:
Wayne Waters, Harry Robbins, Randy Dietel, Mark Weisz.

Education Committee
Chairman: Mike Elliott
P: (904) 284-1779
F: (904) 284-2588
1058 Roland Avenue
Green Cove Springs, FL 32043
education@piledrivers.org

Education Committee Members:
Charlie Ellis, Herb Engler, Jim Frazier,
George Goble, Van Hogan, Sandra Koslow
Garland Likins, John Linscott, Rusty Signor,
Gerald Verbeek.

Environmental Committee
Chairman: John Linscott
P: (207) 799-8514
F: (207) 799-8538
89 Pleasant Ave.
South Portland, ME 04106
environmental@piledrivers.org

Environmental Committee Members:
Bad Abbott, Jim Bay, Chuck Blakeman,
Gordon Boutwell, Ed Hajduk,
Garland Likins, Mark Miller, Mark Svinkin,
Joe Savarese, Barry Roth, Warren Waite

Market Development Committee
Chairman: Michael F. Engestrom
P: (954) 384-4545
F: (954) 337-0831
772 Sand Creek Circle
Weston, FL 33327
marketdevelopment@piledrivers.org

Market Development Committee Members:
Dean Abbondanza, Stan Baucum,
Cliff Bengston, Dave Harper, Rory Kelly,
Dean Mathews, Scott Whitaker,
Max Williams

Membership Development Committee
Chairman: Rory Kelly
P: (703) 978-2500
F: (703) 978-2908
5610-B Sandy Lewis Dr.
Fairfax, VA 22032
membership@piledrivers.org

Membership Committee Members:
Harry Robbins, Mark Weisz, Van Hogan,
Randy Dietel, Mike Elliott, Garland Likins,
John Linscott, John King and Warren Waite

Technical Committee
Chairman: Dale Biggers
P: (504) 821-2400
F: (504) 821-0714
P.O. Drawer 53266
New Orleans, LA 70153
technical@piledrivers.org

Technical Committee Members:
Dale Biggers, Dan Brown, Joe Caliendo,
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The PDCA's South Carolina chapter was founded in 2003. Its formation was born out of a necessity and desire of the founding members to collectively assemble and unite all of the pile drivers in the state to market their product – driven piles. The founding members of the chapter were: Cape Romain Contractors, Marine Construction, Palmetto Pile Driving, Inc., Parker Marine Contracting Corp, and Pile Drivers, Inc. One of the founding members, John King of Pile Drivers, Inc., and current President of the PDCA South Carolina Chapter understands the significance of local PDCA chapters. John states, “The local chapter creates an opportunity for all companies associated with pile driving to have a common voice on issues affecting their industry, helps promote the driven pile as an effective solution to deep foundation construction, and increases market share for the driven pile industry.” John also indicated, “A big challenge the chapter overcame was convincing the members that the chapter was meant to unite the companies that represented the pile driving industry in the state of South Carolina and was not meant to be a forum for companies to seek an unfair competitive advantage.” This challenge did not take long to overcome and now the chapter and its members are forging ahead and addressing the important issues as they arise.

The chapter began with 22 members, with pile driving contractors representing 7 of the initial 22. The balance of the membership was represented by structural engineers, geotechnical engineers, material suppliers, equipment suppliers, and trucking firms. The chapter’s current membership includes 31 firms with 6 more prospective members ready to join any day.

Since its formation, the chapter has faced many issues and has made considerable progress on behalf of the members. However, the single most celebrated issue accomplished by the Chapter is their involvement in the College of Charleston, School of Business project, which was featured in the Summer 2004 issue of Piledriver. The project was originally designed on auger cast piles. However, the PDCA South Carolina Chapter came together during a pre-bid meeting and convinced the Engineers and School that driven piles would be a more efficient and effective alternative for their project, and steel piles were driven. Two years later, after seeing the benefits of driven pile over auger cast, The College of Charleston School of Education designed and constructed utilizing driven steel H-piles for the foundation. The PDCA South Carolina Chapter’s story doesn’t end there! When the College of Charleston started a Mixed Use Housing project, it too was on driven piles. Currently, there are two
**Nucor-Yamato Steel’s HP8, HP10, HP12 & HP14, PS and PZ Sheet Piling**

**STEEL H-PILES**

HP14x73, HP14x89, HP14x102, HP14x117
HP12x53, HP12x63, HP12x74, HP12x84
HP8x36, HP10x42, HP10x57

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NATIONWIDE PILING DEALER NETWORK
SHEET PILES HAVE PREFERRED BALL & SOCKET INTERLOCK
H-PILES AVAILABLE IN ASTM A572 GRADES 50 & 60

**PZ SHEET PILING TECHNICAL DATA**

| Section Designation | WIDTH in | HEIGHT in | THICKNESS | AREA in² | WEIGHT lb/ft | WALL in² | FLANGE k/in | WEB k/in | AREA in² | WEIGHT lb/ft | WALL in² | FLANGE k/in | WEB k/in | AREA in² | WEIGHT lb/ft | WALL in² | FLANGE k/in | WEB k/in | AREA in² | WEIGHT lb/ft | WALL in² | FLANGE k/in | WEB k/in | AREA in² | WEIGHT lb/ft | WALL in² |
|---------------------|---------|-----------|-----------|---------|-------------|--------|-----------|---------|---------|-------------|--------|-----------|---------|---------|-------------|--------|-----------|---------|---------|-------------|--------|-----------|---------|---------|-------------|--------|-----------|---------|---------|-------------|--------|-----------|---------|---------|-------------|--------|-----------|---------|---------|-------------|--------|-----------|---------|---------|-------------|
| PZ22                | 22.0    | 559       | 9.0      | 229     | 0.375       | 9.5    | 9.5       | 11.86  | 76.51   | 60.0        | 22.0  | 107       | 18.1   | 97.0    | 4.48         | 1.37   |           |         |         |             |        |           |         |         |             |        |           |         |         |             |        |           |         |         |             |
| PZ27                | 18.0    | 457       | 12.0     | 305     | 0.375       | 9.5    | 9.5       | 11.91  | 78.44   | 60.3        | 27.0  | 132      | 30.2  | 184.06  | 4.48         | 1.37   |           |         |         |             |        |           |         |         |             |        |           |         |         |             |        |           |         |         |             |
| PZ35                | 13.94   | 375       | 14.9     | 409     | 0.600       | 15.2   | 15.2      | 19.41  | 125.23  | 66.6        | 40.3  | 171      | 48.5  | 266.00  | 5.37         | 1.64   |           |         |         |             |        |           |         |         |             |        |           |         |         |             |        |           |         |         |             |
| PZ40                | 12.64   | 315       | 14.9     | 409     | 0.600       | 15.2   | 15.2      | 19.30  | 124.52  | 65.6        | 40.0  | 195      | 60.7  | 326.00  | 5.37         | 1.64   |           |         |         |             |        |           |         |         |             |        |           |         |         |             |        |           |         |         |             |

*Note: Nominal coating area excludes socket interior and ball of interlock.*

**PS SHEET PILING TECHNICAL DATA**

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<th>WEB (tw)</th>
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<th>WALL in²</th>
<th>WEAR 3/4 in</th>
<th>AREA 3/4 in</th>
<th>AREA 1/2 in</th>
<th>AREA 1/4 in</th>
<th>AREA 1/8 in</th>
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<td>10*</td>
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*Note: Rotation decreases by 1.5 degrees per 10 feet for piles over 70 feet in length.*

**AVAILABLE STEEL GRADES**

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<th>YIELD STRENGTH (ksi)</th>
<th>INTERLOCK STRENGTH (k/in)</th>
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<tr>
<td>PZ</td>
<td>A 328</td>
<td>39</td>
<td>—</td>
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<tr>
<td>A 572 Grade 50</td>
<td>50</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>A 572 Grade 60</td>
<td>60</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>A 588</td>
<td>50</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>A 690</td>
<td>50</td>
<td>—</td>
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</tr>
<tr>
<td>PS</td>
<td>A 328</td>
<td>39</td>
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<tr>
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</tr>
<tr>
<td>A 588</td>
<td>50</td>
<td>20</td>
<td>—</td>
</tr>
<tr>
<td>A 690</td>
<td>50</td>
<td>20</td>
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</tbody>
</table>

Delivery conditions and tolerances according to ASTM A6/A6M latest revision with the exception of length, which is +4",-0.

**MAXIMUM INTERLOCK STRENGTH**

- PS: 24 k/in
- PZ: 20 k/in

**MINIMUM ROTATION**

- PS: 10°
- PZ: 10°

**NUCOR-YAMATO STEEL PILING DEALERS**

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3. J.D. Fields and Company, Inc.
   Chicago, IL
   708/333-5511
   Täna, WA
   253/274-9800
5. Skyline Steel Corporation
   Birmingham, AL
   205/282-9809
6. D.P. Nicoli, Inc.
   Tualatin, OR
   503/692-6080
7. Mid-America Foundation Supply, Inc.
   Fort Wayne, IN
   260/424-9405
   Tacoma, WA
   253/274-9800
9. Mid-America Foundation Supply, Inc.
   Fort Wayne, IN
   260/424-9405
10. Nucor-Yamato Steel Piling Dealers
    Fargo, ND
    701/282-2345

**WEIGHT OF SHEET PILE WALL**

- PS: 50 cm²/m²
- PZ: 97 cm²/m²

**MOISTUWE**

- PS: 10.5 in²/ft
- PZ: 12.5 in²/ft

**MOMENT OF INERTIA**

- PS: 0.4 in⁴/ft
- PZ: 0.5 in⁴/ft

**SECTION MODULUS**

- PS: 3 in⁴/ft
- PZ: 3 in⁴/ft

**NOMINAL COATING AREA**

- PS: 1.11 ft²/m
- PZ: 1.11 ft²/m

**MAXIMUM ROLLED LENGTHS**

- PS: 65 feet
- PZ: 85 feet on single sheets, 70 feet on pairs

*Note: Maximum Rolled Lengths (longer lengths may be possible upon request) PZ: 85 feet on single sheets, 70 feet on pairs
PS: 65 feet
new parking garages in the planning stages for the College of Charleston and The City of Charleston that are being designed using driven pile. King states, “Never say it’s just one project. Convincing Engineers and Owners of the benefits of driven pile over other construction methods has long-term implications that benefit our industry; and the College of Charleston School of Business (and subsequent projects) is just one example of a driven pile victory and a local Chapter victory!”

“Another accomplishment we are very proud of is that we have opened a clear line of communication in our area between the engineering community and the pile driving community. PDCA of SC recognizes that by helping our engineering friends better understand the driven pile, we are more likely to get due consideration when deep foundations are designed.”

As Chapter President, King indicated the chapter’s future goals include growing the chapter membership, seeing to it that if deep foundations are called for in a project that everyone on the design team understands that driven piles are the best, and to help everyone to understand that vibration from pile driving is more myth than reality.

The chapter just had its first quarterly meeting of 2006 – the 12th since its inception, and recently conducted its 2nd Annual Driven Pile Technical Seminar with 88 attendees.

King feels that being a member of a local chapter “ Makes the little guy (which represents a lot of today’s pile driving companies) part of a bigger group and once again provides them with a common voice.” King states, “Membership is the key. The greater the membership, the larger the voice, the larger the voice, the more our message is heard – ‘Driven piles are a much better product to build on!’”

When asked why he thinks there aren’t more local chapters, King said “Reason number one, you need someone like Harry Robbins (Co-Founder and first President of the PDCA South Carolina Chapter) to take a leadership role and help organize it. Like Harry, this individual must be very passionate about the necessity and benefits of a local chapter. Harry is a role model for all local chapters and as the 2006 National PDCA President, has dedicated himself to providing the framework to those who share his vision and passion for a local chapter.” The number two reason states King is “you need all the pile drivers to realize that you work together on public jobs and they are out there for everyone. The local PDCA does not get involved in private jobs unless asked to by the pile driving contractor. The more pile driving jobs out there, the more we all work.”

And finally, on the matter of local chapters, King says to PDCA members who are considering starting a local chapter of their own – remember what Randy Dietel, 2005 PDCA President said best during the 2006 PDCA Annual Conference in San Antonio, Texas this past March, “Local Chapters are where the rubber hits the road!” To King, this means, “Who cares more about the pile driving in your backyard than you? It’s your business, it’s your industry, it’s your future… support it and help it!” President Ronald Reagan’s favorite quote that he displayed in the Oval Office said, “There’s no limit to what man can do or where he can go if he doesn’t mind who gets the credit.”
Charleroi Locks & Dam River Chamber Stabilization

The Locks and Dam #4, located on the Monongahela River near Charleroi, Pennsylvania, is in the initial stages of a multi-phase construction project under the direction of the U.S. Army Corps of Engineers. The dam structure was renovated in the 1960’s and remains in excellent condition. The lock structures, however, are in poor condition and are in need of replacement. The existing locks were constructed in the 1930’s and are supported on driven timber piles. The locks are comprised of a 56’ x 720’ main landside chamber, and a 56’ x 360’ auxiliary river chamber. As one of the initial contracts to be awarded as part this multi-phase project, the purpose of the River Chamber Demolition Contract was to perform the preliminary work necessary for the future construction of the foundation of the new middle wall whose center line will pass directly through the existing chamber.

Before the chamber could be de-watered for this work, 36-inch steel struts needed to be installed within the chamber to support the middle and river walls. The lower portion of the river wall that would be subjected to a water head differential when in the de-watered state had to undergo additional stabilization measures because the existing timber piles would not be able to take the additional loading conditions. This was accomplished with the H-Pile Stabilization Program that was conducted from August 25, 2005 until its completion on October 26, 2005.

Driven Pile Considerations

The Charleroi Locks & Dam #4 River Wall Stabilization was chosen as the PDCA Project of the Year (over $1 million) for the extensive use of driven piles on a lock construction project to stabilize a portion of the lower river wall of the lock and to protect and prepare the river chamber for de-watering. The project pile work consisted of 814 tons of PS27 sheet pile and 180 tons of plated HP 14 x 117 piles. The main features of construction were to install a 30’ diameter protection cell, a 47’ diameter guard cell, two 47’ diameter closure cells with 15’ diameter arc wings, a 90’ long sheet pile cut-off wall, a jet grout cut off wall, 40 plated HP 14 x 117 support piles, and the demolition of concrete struts within the de-watered chamber.

One of the most crucial features of work was the installation of the 40 support H-piles. These piles were installed to support the massive concrete monoliths of the lower guard wall while the river chamber was in the de-watered state. The design called for the piles to be driven to bearing capacities up to 600 tons. Approximately half of...
the piles were to be driven on a batter of 9 to 29 to match the slope of the river face on the monolith wall. The remaining piles were driven plumb to match the chamber face of the monolith wall. All piles were to be connected to the monolith walls by welding them to 5'x 8'x 2" thick steel connection plates that were bolted to the monolith wall face. Precise control during driving was critical to keep the piles on the proper batter and to keep them within the limited weld zone of the connection plates. Access was difficult as the top of the monolith wall was only 5-feet wide and 22-feet above the waterline.

The Joseph B. Fay Company first drilled a series of 24, 1-3/8" holes into the monolith wall to grout in the anchor bolts that would hold the pile connection plate. After the connection plate was mounted, special knockout template frames were fabricated that attached to the connection plate anchor bolts to align the pile at the water line. The templates were fabricated with removable shim plates to account for the cover-plated portion of the HP14x117. The top 22 feet of each HP14x117 pile was plated with 1" thick by 16" wide steel plates on both flanges. This caused a need for a 14" guide template during early driving and a 16" guide template near the end of driving. A combination access platform and variable width template was anchored to the top of the monolith wall to provide access for the crew and receive the pile leads. The Joseph B. Fay Company consulted PDCA member Sunbelt Pile
Driving for their hammer needs and a Berminghamammer B5505 (rated energy of 106.2 kip-ft) equipped with a hydraulic starter and 32” box leads was chosen to drive the piles. A barge mounted 4000 Manitowoc crane handled both the piles and the hammer. The piles were set through the top access template and into the drive frame guides. Once the piles were set, the leads were pinned to the access template, and after the pile and leads were properly aligned, driving began under the direction of Michael Morgano of PDCA member GRL Engineers, Inc. who performed dynamic testing on each pile.

The scope of the dynamic testing first involved the testing of two piles, which were monitored using the Pile Driving Analyzer® during initial driving and during restrike, approximately one week after initial driving. Testing was also to be performed on each of the 40 production piles during initial driving to compute pile capacity and evaluate pile integrity. The piles were to be driven through about 20 feet of alluvium to the top of rock at elevation 690 feet. It was assumed that the piles would drive through the upper Clay Shale formation until they reached the Ames Limestone formation at the approximate elevation of 680 feet.

Dynamic testing of the two initial test piles on this project indicated a potentially dangerous loss in pile capacity over time due to relaxation at the pile toe in the Clay Shale. The CAPWAP® computer program was used to analyze the collected data and indicated the loss in end bearing was approximately 22 and 38 percent for the two test piles. Based on these observations and on past experience with relaxation, criteria were established to estimate the capacity loss for piles within a given design load range as follows:

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<th>Design Capacity Range</th>
<th>Assumed end bearing loss</th>
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<td>400+ kips (1780+ kN)</td>
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<td>60%</td>
</tr>
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</table>

Adjustments to the required service life capacities of the piles were made to account for the losses. Using the above established criteria, the target end of drive capacities were calculated to account for the specified safety factor of 2, the assumed end bearing loss due to relaxation, and a small increase in friction capacity due to soil set-up. Because all piles on the project were tested, each pile was driven continuously until dynamic measurements indicated the target end of drive capacity had been mobilized, as opposed to the typical practice of determining blow count driving criteria to achieve the required service life capacity. Testing throughout the driving of production piles verified the required capacity and integrity of each pile and provided reliable foundation quality control.

Design/Award Considerations

This project was considered for this award because the tolerance of driving piles was critical. The piles had to be driven under water with care to avoid existing underwater concrete structures. Likewise, the placement was critical for the next
phase where battered anchors were to be installed between the piles to support the monolith wall sections for further excavation under the wall foundation. The piles were secured to the sides of the monolith wall sections by bolted 5’ x 8’ steel plates.

**Project Benefit**

This stable wall for future expansion of Charleroi Locks will allow larger barges to pass through locks, making transportation on the river more efficient and cost-effective.▼

*Owner: U.S. Army Corps of Engineers, Pittsburgh, PA*

*General Contractor: Choi Enterprises, Inc, Pittsburgh, PA*

*Sub-Contractor: Joseph B. Fay Company, Tarentum, PA*

*Pile Testing Consultant: GRL Engineers, Cleveland, OH*

*Suppliers: Sunbelt Pile Driving Equipment, Charlotte, NC; Skyline Steel, LLC, Parsippany, NJ; Dura-Bond, PA*
WPC, an engineering, environmental, and construction services firm, recently won the Grand Award for the 2006 ACEC-GA Engineering Excellence Awards (EEA) competition. The EEA competition is a national program sponsored by the American Council of Engineering Companies (ACEC). The project submitted by WPC for the competition, the “Southern LNG Terminal Expansion Project,” involved the construction of an additional LNG tank at the Southern LNG terminal located on Elba Island in Savannah, Georgia. WPC provided an in-depth subsurface investigation, seismic analysis, and test pile program for the design and construction of the expansion project.

As one of only four marine LNG terminals currently located in the U.S., the import facility which is owned and operated by El Paso Corp., will soon boost more than 7 billion cubic feet of liquefied natural gas, providing needed relief to the already tightening inventories of natural gas currently available in the U.S. The Southern LNG Terminal is regulated by the Federal Energy Regulation Commission (FERC), and therefore, must adhere to stringent engineering and design standards similar to nuclear power plants in order to obtain the necessary permits for the terminal expansion.

The WPC Savannah Office, led by Dr. Guoming Lin, was contracted to provide the services. WPC’s geotechnical and seismic study set new records for geotechnical work in the Savannah area in terms of boring depth, use of new technologies in field exploration and laboratory testing and intensity of foundation and ground improvement evaluation. Subsequent to the geotechnical study and FERC review, WPC performed a pile load test combining several innovative and state-of-the-art techniques. WPC engineers were able to demonstrate that sand layers, after densification from pile driving, would not succumb to liquefaction even during a 10,000 year earthquake. In addition, WPC was able to improve lateral load capacities using site specific load capacities obtained during the pile load tests.

In a review memo written by the FERC expert, Dr. Felix Yokel stated “All field exploration was performed in accordance with applicable standards and was of a very high quality,” and “it is also noted that the principal investigator, Dr. Guoming Lin, has considerable knowledge and experience in dealing with the conditions encountered at this particular site.” On his review memo to the FERC on WPC’s Pile Test Report, Dr. Yokel noted, “In my opinion the testing program was well conceived and executed.” According to engineers with CB&I, the design/build contractor on the project, they have not witnessed similar positive remarks by Dr. Yokel on geotechnical and seismic studies on previous projects.

About WPC, Inc.
Founded in 1993, provides a wide range of design, planning, and testing with geotechnical, construction services, and environmental engineering projects. This blend of services is often interrelated with the cycle of a project allowing WPC engineers to have a holistic approach to the project. WPC is based in Mt. Pleasant, SC with additional offices in Columbia, SC; Myrtle Beach, SC; Charlotte, NC; and Savannah, GA. For more information, visit www.wpceng.com.
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Collecting Your Money or, Why Some Contractors Work for Free

Most participants in construction think “the job” first, and “the money” second, or only when trouble is brewing. Usually, by that point, it may be too late to develop a good collection system. The following are some helpful tips for your controller, office staff, and collection personnel, as part of a routine to “think like a lender” and be the squeaky wheel who gets paid, without having to go to court.

Why do Subcontractors Work for Free?

Charitable work can be the most gratifying of endeavors – that is, where the charity is by choice. Too often, subcontractors, engineers, subconsultants, and others far down the economic food chain are told they must wait months or even years for payment after their blood, sweat, toil, and piles are all in the ground. Here are some basic underwriting tasks to do on each project and each bid, up front, to think like a lender.

The key questions are always, how am I going to get paid and what remedies are available if I do not get paid?

Here are some common sense ideas that bear mention even if for most, they are already woven into the contract administration of the office and the interaction between marketing, estimating, accounting, clerical, and risk management personnel:

Failure to Read the Contract. A written contract usually controls over contrary terms, handshakes, and those famous words at the end of the project, “I will take care of you don’t you worry.” I say, start worrying! Read the contract proposal with care, and highlight terms that are either unclear or contrary to your bid terms or standard practices. Use your risk management team – insurance broker, CPA and attorney – to help you craft good, protective language and avoid bad contracts.

Here are some examples of bad contract language that can alert you to a contractor who may be difficult to deal with: A “paid if paid clause” provides that no monies are ever due unless and until the prime contractor collects from the project owner. What if the owner goes bankrupt, are you out of luck? In California, we have a court decision, Yaminishi v. Bleily & Collinshaw (1972) 29 CA3rd 457, that stated these clauses are to be read in a limited and reasonable way not as an absolute condition, but as a reasonable time frame for cash flow. Check your state’s approach to such clauses.

Some contracts call for waiver of lien rights. In many states, it is void against public policy to waive lien rights before starting work, because the state law on liens is protective of unpaid claimants.
Some contracts have one-sided indemnity provisions that require a subcontractor to defend and indemnify the prime contractor even if the subcontractor has no fault. Consider using a clause where each party defends and indemnifies the other to the extent of fault, as a fair and balanced “pay for what you break” approach. Indemnity clauses are written to require one party to pay for what another party breaks. This sort of “Type I” indemnity clause can be particularly onerous when the prime contractor also requires the subcontractor to name the prime contractor as an “additional insured” under the subcontractor’s general liability policy. Now, the subcontractor and its insurer may be faced with defending claims that arise from design, or excluded scopes of work, simply because at the end of the day, the pile driver was driving the pile.

Schedule clauses should be reviewed with care. What are the liquidated damages on the project? What level of input does the subcontractor have in developing the schedule? Are there special access, or lead time issues to contend with? If there are, they should be addressed in specific contract language.

What are the dispute resolution clauses? Does the subcontractor have to wait until the prime contractor completes his claim with the owner? Is retention due at the end of the project even if the piling has been accepted for years, and is holding up the building? Pile drivers should state in their proposals that final payment including retention is due 30 days after acceptance of the piling. Once the pile caps are poured over the piles, there is no more “punch list” for the pile driver to perform, and no reason to hold onto the pile driver’s money any longer.

Investigate the Project, Owner, and Prime Contractor. It is important to develop a project information sheet to submit via fax or e-mail to prime contractors and owners soliciting bids. They can then fill it out and tell you whether the project is public or private, the name of the owner, lender, surety (if any), bond number, property address and assessor’s parcel number (APN), and other key information. This sheet will prove invaluable later in filling out the key collection paperwork such as pre-lien notices, mechanics liens, stop notices, and claims on payment bonds. Get this information at the outset when everyone is happy to share data, not at the end of a bad project when no one will return anyone’s calls and the money has run out.

Other investigative means are available such as Internet tools that reflect a party’s litigation history, credit, security interests and real property ownership, tax liens and the like. Every contractor should have some search engine to use to investigate, in addition to checking the license board for other contractors’ good standing.

Always, Always, have a valid contractor’s license. Most states require that to go to court to collect money, a contractor must have a valid license from the start of the contract to the end. Some courts and states interpret this very strictly. As an example – a contractor who owns an individual license, but does business under a corporation that does not have a license, may be out of luck. Two licensed contractors who enter into a joint venture without getting a separate joint venture license may be out of luck. If you are held unlicensed, you do not collect, and may have to pay back what you were paid while unlicensed. It can be a real disaster. Be sure your license is correct and you are doing business under your licensed name, and avoid these horror stories.

Timely serve pre-lien notices using the proper forms every time. On many projects, a subcontractor has no right to record a mechanics lien on the property, or rights against the construction fund of the owner by

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stop notice, or even rights against a payment bond, unless a timely pre-lien notice is properly served. Too often, this paperwork is forgotten until a problem arises, and then it is too late. Develop a system with trained staff to know the applicable forms, and use them every project. A pre-lien notice, such as a preliminary 20-day notice, is like a guarantee of payment from a second source – the owner’s fund, the land, or the surety. To have the guarantee, one must have the right form served on the right parties at the right time. Get this procedure down pat, and you will preserve those key rights.

Do not wait until the last minute to start collection efforts. Much of collection strategy is getting there first, when the debtor is still flush with cash, and when the job has not soured. An early sub who waits for payment until the project ends, may find that the owner or prime went bankrupt, or the owner terminated the contractor, or there was a major accident on site. This makes collection more difficult. Get in line early. Calendar your invoice due dates and have staff call and take notes of conversations over when the check will be sent. Once an invoice is 45 days past due, especially if the project is coming to a close, consider filing a lien, stop notice, or bond claim. Once you do, turn it over to your attorney for suit. Do this once, and you will retrain recalcitrant payers who thought you worked for free.

Some tips on invoice and bid language. States have different rules on finance charges. In California, it is not usury to charge 18 percent finance charge on delinquent balances. A frequent California invoice or bid form might read, “18 percent per annum finance charges apply upon all past due amounts”. This can be handy in collection negotiations, as these “cost of money” clauses really add up.

Prompt Pay Statutes are there to encourage payment. Many states have adopted “Prompt Pay” Statutes that call for penalty interest and attorneys fees in the event a prime contractor is paid a progress payment that is partly for a subcontractor’s work, and fails to pay the subcontractor his portion within 10 or so days. These statutes seek to prevent others using your money to finance their cash flow woes. Many state agencies now have Web sites that display when a prime contractor is paid, for more transparency.

Call a meeting, and bring your experts to avert trouble early. Many lawsuits are simply about meetings that needed to take place and did not. The failure to timely communicate is the root of not only construction problems, but collection problems. The contractual expectations to be real must be enforced; enforcement starts with gentle and then not so gentle reminders of “this is what we agreed – I agreed to work, and you agreed to timely pay for that work.” When there is a genuine dispute over workmanship, schedule, delay, safety, claims and the like – meet with the other parties and get it resolved, and plan together how to “Get to Yes.” Bring a knowledgeable engineer with you to help analyze and present your position if valid and help you sort out in advance if you are right, wrong, or a little of both. Do not wait. Establish dispute resolution as part of project management to avert collection stalemates, and a lawyer feeding frenzy later in court at your expense.

If you have a valid claim for extra costs, properly and timely document. Many valid extra cost claims are lost due to untimely or weak documentation that does not establish entitlement, or meet the notice requirements of the contract or specifications. Many specifications require a notice of potential claim within 48 to 72 hours of a claim event as a condition of a later claim. Also, be sure that the claim is valid, well supported, and not “smoke and gas” or riddled with errors. Such claims can expose a contractor to false claim liability. Have a CPA review your costs, and make sure they are based on actual costs and not pie-in-the-sky formulas or cookbook recipes. Those recipes usually do not taste good, and the contractor is often forced to eat his words later if the claim is overstated or lacks support. Use great care in this area in today’s market where public owners may be more than willing to countersue.

Conclusion

Pile Drivers in bidding can be said to literally “bet the company” on many a risky project. The construction and design challenges need not be compounded by poor collection practices. Get your collection team in shape, with good forms and procedures, think like a lender, and always get paid. ▼

Mark J. Rice is a California attorney who represents pile driving contractors, and is a member of the California ACG Legal Advisory Committee. Mr. Rice litigates differing site condition claims, defective specification claims, and property damage claims. He can be reached at markrice@msrulaw.com.
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Detailed Specifications: PZC 26

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<td>36.0 lbs/ft²</td>
<td>39.8 lbs/ft²</td>
<td>16.0 in</td>
<td>76.2%</td>
<td>2.38</td>
<td>23.8</td>
<td>0.12 ft²</td>
<td>0.55 ft²</td>
<td>1884 in²</td>
</tr>
</tbody>
</table>

Detailed Specifications: PZC-B 51

<table>
<thead>
<tr>
<th>Section Modulus</th>
<th>Weight @ 60%</th>
<th>Weight @ 100%</th>
<th>Pile Width</th>
<th>Flexibility</th>
<th>Setting Ratio</th>
<th>Driving Ratio</th>
<th>Nominal Coating Area</th>
<th>Nominal Section Area</th>
<th>Moment of Inertia</th>
</tr>
</thead>
<tbody>
<tr>
<td>95.1 in³/ft²</td>
<td>36.0 lbs/ft²</td>
<td>39.8 lbs/ft²</td>
<td>16.0 in</td>
<td>76.2%</td>
<td>2.38</td>
<td>23.8</td>
<td>0.12 ft²</td>
<td>0.55 ft²</td>
<td>1884 in²</td>
</tr>
</tbody>
</table>
Hurricane Katrina was the 11th named storm, fifth hurricane, third major hurricane, and first Category 5 hurricane of the 2005 Atlantic hurricane season. It was the third most powerful storm of the season, and the sixth-strongest ever recorded. Katrina formed over the Bahamas on August 23, and crossed southern Florida at Category 1 intensity before strengthening rapidly in the Gulf of Mexico, becoming, at that time, the strongest hurricane ever recorded in the Gulf. Only to be broken later in the season by Hurricane Rita. The storm weakened before making its second landfall as a large Category 3 storm on the morning of August 29 along the Central Gulf Coast.

The storm surge from Katrina caused catastrophic damage along the coastlines of Louisiana, Mississippi, and Alabama. Levees separating Lake Pontchartrain from New Orleans were breached by the surge, ultimately flooding about 80 percent of the city, all of St. Bernard Parish and portions of St. Tammany and Plaquemines Parish. Wind damage was reported well inland, impeding relief efforts. Katrina is estimated to be responsible for $75 billion in damages, making it the costliest hurricane in United States history; the storm killed more than 1,400 people, becoming the deadliest U.S. hurricane since the 1928 Okeechobee Hurricane.

In moments of tragedy, it is the indomitable human spirit that gives us the strength to rise above adversity. In summer 2005, Hurricane Katrina cast a very dark shadow on the U.S. Gulf shores. Katrina was one of the worst natural disasters to strike the U.S. in more than 75 years. The path of destruction she left behind throughout the Gulf coast is still visible today. The outpouring of aid and assistance from individuals, groups and corporations that followed these tragic days proved the power of the human spirit can and will triumph.

Of all the Gulf coast areas stricken, New Orleans was one of the hardest hit. With an average elevation of 16’ below sea level, the city of New Orleans bowl like landscape is protected by an elevated levee with the sole intention to keep the water out. The levee was designed to withstand storm events, but no one had anticipated anything of this magnitude. On midday Aug. 29, 2005, the storm surge of Katrina swept across the levee at the 17th
street and London Street canals with such incredible force, a 300’ wide breach in the structure opened and the waters from Lake Pontchartrain came pouring in. Faced with loss of life, immediate action was needed to limit those losses and stem the flood waters at both points.

As the “authority having jurisdiction” The U.S. Army Corps of Engineers rapidly assessed the damage and developed a rehabilitation plan. They recognized that securing the breaches was priority one. Until the inflow of water was stopped, dewatering would be futile. Consideration was given to numerous temporary methods of construction for the levee repair, but availability of materials, constructability, and speed of installation were the prevailing factors. The obvious solution was hot rolled steel sheet piling, and lots of it!

As one of the largest marine contractors in the district, Boh Brothers holds annual maintenance and construction contracts with the Corps. In operation for more than 80 years, Boh Brothers has been involved with the New Orleans growth and community for a long time. When the Corps called on their marine contracting expertise to expedite the response and start repairs, they were ready to start rebuilding. The experience and quality relationships they possess with their vendors in the marine & pile construction industry has served Boh Brothers well. They knew exactly where to turn for

Never forgotten, the tragic events of Katrina are months past, but still remaining in the hearts and eyes of those who survived.
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immediate supply of steel sheet pile; Skyline Steel. Boh Brothers have been purchasing steel piling from Skyline for more than 20 years. Skyline has always been considered a highly responsive supplier carrying large quantities of inventory. The City of New Orleans and the Army Corps of Engineers would put that claim to the test.

By Tuesday morning, less than 24 hours after the breach, Skyline Steel received an emergency company wide request for available sheet pile & structural steel on the ground. With a combination of AZ sheet piles and 24” wide flange beams from Nucor-Yamato Steel, Boh Brothers had devised a remediation plan to repair the levee with material on the ground. On Wednesday morning, the first of eighteen truckloads carrying over 400 tons of AZ-18 sheet piles ranging in length from 50’ – 65’ were on the road to New Orleans. Come noon Thursday, Boh Brothers had begun driving the first of 143 pairs of sheet pile narrowing the breach. In the following days, the levee would be secured and the dewatering would commence. New Orleans was on its way to recovery.

The temporary sheet pile wall installation was comprised of hot rolled AZ-18 sections and Nucor 24X146 wide flange beams. Because this was a temporary rehabilitation, material lengths and pile section were not as critical to the repair as was getting them in place as soon as possible. The Corps would later let a contract for the sheet piles to be removed and a new permanent wall to be constructed of AZ-26 @ 65’ lengths. This contract was awarded to Boh Brothers and they again turned to Skyline Steel for the material source. Almost exactly two months to the day of the tragic event, Skyline delivered
the first of 203 pairs of AZ-26 sheet piles for the permanent installation. This will get the levee back up to a Category 3 design or better. The Corps and other federal agencies in association with consultants are going through cost engineering and risk analysis to determine the disaster category levee design required for the long term protection.

Never forgotten, the tragic events of Katrina are months past, but still remaining in the hearts and eyes of those who survived. No one can be certain that the New Orleans landscape will return to its original luster. All around, there are still reminders of the devastation, but the clean up continues. Whatever effect Hurricane Katrina has imposed on the future infrastructure requirements to protect the Gulf shores will become evident in the upcoming months.

---

**Note From Skyline Steel:**

Skyline is accustomed to being part of every day material solutions for our customers. The importance of this delivery transcended company goals. When you directly impact life safety, service and response become more than company values. We are proud to have played a part in the solution that repaired the 17th Street & London Street canal breaches. Not for reasons of financial gain or notoriety, but for reasons of human interest. Being able to contribute in a time of despair gives an unrivaled sense of purpose. We take great joy in knowing that our response may have helped with the rescue efforts. Skyline will remain committed to offering the availability and service to meet those material needs.
We are the premier association for pile-driving contractors

The PDCA was founded in 1996 to promote use of driven-pile solutions in all cases where they are effective. We strive to build and maintain working relationships among end users, manufacturers, government agencies, educational institutions, engineers and others involved in the design, installation and quality control of the driven pile.

We are dedicated to advancing the driven pile

As the only organization solely dedicated to pile-driving contractors, we know that you understand the superiority of the driven pile in most applications. We are the only association addressing the intrusion of non-driven solutions that take away business from the driven-pile contractor. The PDCA understands that to survive in today’s competitive marketplace, a pile-driving contractor must strive to stay abreast of the latest trends and technologies in the industry. That is why we maintain close ties with the world’s leading suppliers to the industry. It’s why we provide a broad range of educational programs for university professors, practicing engineers and contractors. And, it’s why more and more contractors, engineers and suppliers are realizing that the PDCA significantly increases their value in the marketplace.

We are a direct link to decision makers

Major manufacturers take an active role supporting the PDCA. At our conferences, we bring together the world’s leading design manufacturers and technical application experts to assist you in advancing the driven pile as a superior product.

The PDCA works closely with the technical community to format design codes and installation practices. We offer seminars throughout the country for engineers and educators on the capabilities and advantages of the driven pile. We also work with agencies, such as the Federal Highway Administration and state DOTs, which develop specifications for highway building and other infrastructure projects that use driven piles.

We offer timely, valuable services

The PDCA improves your company’s bottom line, as well as your stature in the construction industry, through a variety of programs and services:

Job Referrals

We are the only organization that provides contractor referrals to end users of driven piles. You tell us where you will drive piles and we will refer you to end-users. We also provide referrals to our supplier and technical members.

Peer-to-Peer Opportunities

With more than 100 contractor members, networking opportunities abound at the PDCA. Whether at our Winter Roundtable, our regional seminars or by just picking up the phone, you’ll develop long-lasting professional relationships and friendships in the industry.
**Annual Membership Directory**

As a member, you’ll receive PDCA’s annual membership directory of our contractor, supplier and technical members. Your company is listed along with the piling solutions you employ and states in which you work. This directory is provided throughout the year to construction users on a complimentary basis.

**Educational Conferences and Meetings**

The PDCA offers cutting-edge education for contractors, engineers, geotechs and anyone else interested in the driven pile and its applications at two major conferences annually. Members receive discounts on exhibit and registration fees.

- The Winter Roundtable, held each February since 1997, is a nationally recognized conference that brings together leading technical experts, suppliers to the piling industry and contractors. This conference focuses on the key issues faced by pile-driving contractors and features discussions and presentations as well as an extensive exhibit area.

- The Design and Installation of Cost-Efficient Driven Piles Conference (DICEP), held each September since 2000, is a nationally recognized two-day conference that brings together geotechnical and design engineers, college professors and contractors to discuss the latest trends in understanding, analyzing and controlling piling costs.

**Industry Development**

The PDCA continually strives to expand market share for the driven pile. The PDCA sponsors the College Professors Piling Institute, held at Utah State University in Logan, Utah. Up to 25 professors, from major engineering schools, are invited to participate in an intensive, week-long program that presents them with the latest concepts in driven-pile design, installation and quality control. Some of the leading faculty in the deep foundation field has attended the institute to date. The program supplies the educators with the tools and knowledge to be able to teach their students about the advantages of the driven pile. It promises to have a long-term impact on market share for the driven pile.

**Publications and Reference Materials**

As a PDCA member, you will receive our quarterly publication, “Piledriver,” which presents articles on issues and trends of interest to our industry. As a member, you’ll receive discounts on advertising in the magazine.

All PDCA members receive a complimentary copy of the PDCA’s codebook, “Recommended Design Specifications for Driven Bearing Piles,” now in its third edition. This book covers all required guidelines for driven piles and includes a suggested bid and payment schedule.

The PDCA also sells “The Pile Design Manual,” an FHWA manual on the design and construction of driven piles. Order forms are available on the PDCA Web site.

**Connect Worldwide at www.piledrivers.org**

The PDCA’s newly redesigned Web site at www.piledrivers.org lets you research the latest trends in the industry and find direct links to manufacturers, suppliers, engineers and others. PDCA members receive a free listing in our member search area, which is being used by an increasing number of end users to find pile driving contractors and services. Our forums area makes it easy for you to connect with others to discuss issues and problems.

**Leadership Opportunities**

Membership in the PDCA provides opportunities for recognition and leadership. Positions are available on the PDCA board of directors and various committees that impact the industry. The PDCA recognizes noteworthy contributions to the industry with our “Driven Pile Project of the Year” award, giving opportunities for high profile recognition.

**Membership is available to you**

There is strength in numbers and we, at the PDCA, need to count your company when telling government agencies, engineers and suppliers that we are interesting in keeping your business viable and in growing market share for the driven pile. We need your ideas and efforts in working together toward a common goal: the use of driven-pile solutions. You can contribute your expertise and assist the Association in developing:

- A greater focus on safety
- The quality of driven pile products
- The formatting of codes and specifications for the driven pile
- Support for a program to help educate students in the use of driven piles

Join today. Be part of a growing and vibrant organization the will play a key role in the future of deep foundations. Support your industry by completing the membership application in this issue. You will immediately begin to enjoy benefits of membership. ▼
Step 1: Select Membership Type
I wish to apply for the following membership status (check one):

- Contractor  [ ] (Annual Gross Sales >$1 Mil./year: $725/year).
  [ ] (Annual Gross Sales <$1 Mil./year: $350/year)
A Contractor Member is defined as a specialty subcontractor or general contractor who commonly installs driven piles for foundations and earth retention systems. Includes one primary membership. Secondary memberships are $75 each.

- Associate ($725/year)
Associate Members of the Association shall consist of firms or corporations engaged in the manufacture and/or supply of equipment, materials, testing or other services to the pile driving industry. Secondary memberships are $75 each.

- Technical Affiliate ($95/year)
Technical Affiliate Members of the Association shall consist of individuals who are involved with the design and installation of driven piles or in teaching the art and science of pile design and installation. They may be employed engineers, architects, government agencies, or universities. Employees of contractors are not eligible to become Technical Affiliate Members. Note: Technical Affiliate Membership category is for individuals only. For a company listing in the directory and on the Web site, you must join as an Associate Member.

- Retired Industry Member ($50/year)
A Retired Member shall be defined as any individual who has reached retirement age as defined by U.S. law, who has left active employment and who wishes to remain a member.
I am retiring as a:  [ ] Contractor  [ ] Associate  [ ] Technical Affiliate

Step 2: Demographic Information

Company Name ________________________________  Phone ________________________________
Your Name ________________________________  Fax ________________________________
Address ________________________________  Email ________________________________
City/State/Zip ________________________________  Home Page ________________________________

Step 3. Method of Payment

Attached is my payment of $___________ for annual dues.

- I understand that dues are due annually on December 31 and, that if I joined PDCA after March 31, I may be entitled to a prorated dues amount for the subsequent year only.

I am making payment in full by

- Check # _____________________________________________________________

- Credit Card:  [ ] MasterCard  [ ] Visa  [ ] American Express
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Name as it appears on card: ____________________________________________ Signature: ________________________

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- MI
- ND
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- LA
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Step 5. Sponsorship: Who told you about PDCA?
Member Name___________________________________________________________________________

Step 6. Method of Payment
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Card Number: _____________________________ Expiration Date: _____________________________

Name as it appears on card: _____________________________ Signature: ________________________

Please send this completed application to: PDCA | P.O. Box 66208, Orange Park, FL 32065
Phone: (888) 311-PDCA (7322) | Fax: (904) 264-9531 | www.piledrivers.org
The 2006 PDCA 10th Anniversary Annual Conference was held in San Antonio, Texas March 2-4, 2006 and by all accounts, the event was a huge success. More than 150 PDCA members, spouses, and guests attended the conference at the Hilton Palacio Del Rio on the famous San Antonio Riverwalk.

Attendees were invited to attend presentations on both contracting and engineering topics. The presentations included, Introduction to Wave Equations, Horizontal Pile Driving and Cofferdams, AASHTO Pile Foundation Specifications, Pile Set Up in Foundation Design, and Challenges of Rebuilding New Orleans in the Wake of Hurricane Katrina, and more. One of the highlights of the conference was a presentation by Walter Baumy, from the New Orleans...
Experience the Progress.
District, U.S. Army Corps of Engineers who offered a first-hand, technical look at the immediate aftermath and resulting devastation brought on by Hurricane Katrina. Mr. Baumy discussed the logistics of coordinating the rebuilding efforts with local, state, and Federal agencies, the efforts required to rebuild the New Orleans’ levee systems, and to get New Orleans back on the road to recovery.

The companions program took spouses and guests on a day trip that included stops at the Wildseed Farm in beautiful Texas Hill Country, Historic Fredericksburg for shopping and dining, and Becker Vineyards for a tour and wine tasting.

Another conference highlight was the Annual Dinner. During the dinner, the 2006-2007 board of directors was introduced, the project of the year awards were presented, and the PDCA honored some special individuals, including Past President Randy Dietel and Charles “Chuck” Whiteaker. The conference concluded on Saturday, March 4, with more presentations, a Ladies Tea Breakfast, the PDCA Executive Committee Meeting, and the PDCA Board of Directors Meeting. Next year, the PDCA will host its 11th Annual Conference at the Gaylord Opryland in Nashville, Tennessee. The PDCA Education Committee is already making plans for next year’s conference and they promise it will be bigger and better than ever before.

The conference was a great success thanks to our members, spouses, and guests who attended and made this event possible. We look forward to seeing you all next year! ▼
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**Charles “Chuck” Whiteaker Honored at PDCA Annual Conference**

During the 2006 PDCA 10th Anniversary Annual Conference in San Antonio, Texas, the PDCA had the distinctive pleasure of honoring Charles “Chuck” Whiteaker during the conference Annual Dinner on Friday night, March 3, 2006. Chuck was recognized before more than 150 of his peers and fellow PDCA members for his contribution, dedication, and commitment to the PDCA over the past 10 years.

Chuck, now retired, but working for Skyline Steel at the time was instrumental in organizing the Pile Driving Contractors Association. Chuck took on the task of generating interest within the pile driving community to form the PDCA, presided over the organizational meetings and developed the organization’s corporate foundation, all of which eventually culminated in the formation of the PDCA in 1995 and officially incorporated as an association on Dec. 20, 1995.

Throughout the formation of the PDCA, Chuck remained steadfast and committed to making the vision of the PDCA a reality. Chuck is to be commended for his dedication and commitment to the PDCA, the only association representing the pile driving industry.

Congratulations, Chuck! Your devotion to this organization and industry has earned you the esteemed recognition of your fellow PDCA members. ▼

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Congratulations to WPC Engineering and Ed Hajduk, winner of an Instantel Innovation Award. The 1920’s Charleston High School building was renovated into the new home of the Medical University of South Carolina’s College of Health Professions Complex. In addition, an adjacent building for the complex and a parking garage were also constructed. The project was unique, as it required the existing historic brick façade of the high school to be preserved and incorporated into the new development.

“Given the concerns that pile driving vibrations might damage the brick walls or disrupt nearby sensitive medical equipment, extensive monitoring was required,” said WPC President Reg Christopher, “WPC’s monitoring plan included pre-condition surveys of the adjacent buildings and the existing brick façade, monitoring of existing cracks noted during the survey, vibration measurements, pile installation monitoring, and a test pile program. At the end of the project, 547 piles were driven in and around the existing brick walls and our monitoring showed no damage to the existing brick or surrounding buildings.”

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—Edward Hajduk, PE, Senior Geotechnical Engineer, WPC Engineering

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Intercoastal Diving, Inc.
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Wilmington, NC
Pile Driving, Marine

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Contact: James H. Maxymillian
Pittsfield, MA
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This excerpt is contained in a [relatively] recent book (copyright 1954) by Aubrey De Selincourt and John Marincola (who are the translators) of the original book by Herodotus titled “The Histories”. Herodotus was born around 490 B.C. and wrote this Greek history (prior to the time of about his death in about 420 B.C.) having traveled the extensively there.

Book 5 of the Histories begins with a statement “The Persians whom Darius had left in Europe under Megabazus command began hostilities against the Greeks on the Hellespont by subduing the Perinthians, who refused to accept Persian domination.”

(This could be the Darius who is referred to in the Biblical book of Daniel, as the times mentioned in the notes seem to match the traditional time of just before 500 B.C.)

Darius heard about the hard working of people in Paeonia (in Macedonia) and issued his commander to campaign there.

In section 16 of Book 5 it then continues... “At the news that their towns were in enemy hands, the Paeonian army disintegrated; the men went off on their own and surrendered individually to the Persians. The result of that campaign was that a number of Paeonian tribes – the Siriopaeones, the Paeoplae, and others as far as Lake Prasias – were transferred bodily to Asia. The tribes in the neighborhood of Mt Pangaeum and on the lake itself were not subdued by Megabazus – though he did attempt the conquest of the latter. The houses of these lake dwellers are actually in the water, and stand on platforms supported on long piles and approached from the land by a single narrow bridge. Originally the labor of driving the piles was presumably undertaken by the tribe as a whole, but later they adopted a different method; now the piles are brought from Mt Orbelus and every man drives three piles for each wife he marries – and each has a great many wives.”▼
PDCA Announces its 7th Annual Design and Installation of Cost Efficient Piles (DICEP)

This year’s program is scheduled to be held in Minneapolis, Minnesota.

This 1 ½ day program is scheduled for Thursday and Friday, September 14 and 15, 2006. Additional information on the schedule, program and dates are forthcoming and will be mailed and posted on the PDCA Web site, www.piledrivers.org.

Calendar of Events

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