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COVER: Piling, Inc. constructs new bulkhead for petrochemical company.
Thank you for your confidence in electing me as your president for 2004. It is indeed an honor. I will do my best to move PDCA forward in accordance with the desires of the members and direction from a very energetic and capable slate of officers and board of directors.

I would first like to congratulate Tanya Goble, who has completed her first year as our Executive Director. Tanya, along with President Jim Frazier’s leadership, direction from the Board, and much effort from the committees and members, has put us in a very positive financial position. They also planned and delivered a very successful Winter Roundtable, Professor’s Course, and DICEP Conference, while greatly enhancing our Web site and magazine. Many thanks to everyone involved.

On November 12, a meeting was held with the Federal Highway Administration in Washington D.C. Jerry DiMaggio, national supervisor of geotechnical engineers, along with Chris Dumas and Peter Osborn, represented FHWA. The PDCA was represented by the executive director, executive officers, and representatives from the technical, membership development, and marketing committees. Representatives from the concrete, steel and timber industries were also present. This meeting, requested by the PDCA, was set up to obtain FHWA’s technical and management input on the industry’s research development and training activities over the next five years. Our objective is to partner with FHWA and state DOTs to better meet the design and construction challenges of current and future highway projects. Discussion on topics, such as the application of high-performance steel and concrete for foundations, pile-supported embankments, and improved equipment for rapid pile installation, made for a very productive meeting. We look forward to continuing our relationship with the FHWA.

Again, thank you for electing me as your leader for 2004. Your Executive Committee and board of directors have formulated an aggressive agenda to make PDCA more visible in 2004. We strive to create obvious reasons for all pile-driving contractors to desire membership in our organization. As a member, help spread the word. If you’re a pile driver, or provide services that support the pile driving industry, then you should belong to the PDCA.
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<tr>
<th>Model</th>
<th>Capacity</th>
<th>Horsepower</th>
<th>Rope Diameter</th>
<th>Max winch line pull / speed</th>
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</table>
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Driven pile foundations have traditionally been, and continue to be, the primary foundation type supporting our nation’s highway structures. The PDCA is collaborating with the FHWA and state DOTs to find ways to better meet the deep foundation design and construction challenges of today’s highway projects.

In November, members of the PDCA board of directors met in Washington D.C. with members of the FHWA National Geotechnical Engineering Team (NGT), led by Jerry DiMaggio, senior geotechnical engineer in the Office of Bridge Technology. PDCA members, representing steel, concrete, and timber piling producers and suppliers also attended. The PDCA and the FHWA NGT have shared an ongoing cooperative relationship for several years and successfully partnered on several efforts to advance deep foundation practice. Complete efforts include:

- National Highway Institute (NHI) Driven Pile Inspector Training program.
- NHI driven pile design and construction courses.
- AASHTO code revisions to support load and resistance factor design (LRFD).
- The Professors Piling Institute held at Utah State University.

For more information on the above NHI programs, visit their Web site at www.nhi.fhwa.dot.gov and search on “driven pile.”

The objective of the November meeting was to obtain the FHWA’s technical and management input on various research, development, and training activities that could significantly advance our industry and dramatically affect the cost, quality, and speed of delivering deep foundation features. These projects may include the development of improved equipment for rapid pile installation, implementation of rapid testing methods for real time assessment of capacity and damage focusing on accelerated construction and improved quality, increasing pile material stresses in order to reduce cost and optimize design, developing environmentally friendly smokeless and noiseless hammers, and the application of high-performance steel and concrete for foundation elements, which can improve performance and cost.

Some next steps include updating the PDCA strategic plan to incorporate the ideas generated from the meeting. You can find out more about the PDCA’s plans by attending the 2004 Winter Roundtable Conference in Orlando from February 19-21. One of this year’s speakers will be Chris Dumas from the FHWA. He will discuss ways that contractors can increase their market share. And, in this and future editions of the magazine, we will be featuring more articles about FHWA and state DOT projects.

The PDCA wishes to thank Jerry DiMaggio, Chris Dumas, and Peter Osborn of the FHWA for their time and we look forward to future joint efforts.
OVERSTOCKED INVENTORY FOR SALE

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<th>O.D.</th>
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<table>
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<td>HP14x117</td>
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When a petrochemical company in the Houston/Gulf Coast area approached Piling, Inc. to design and reconstruct a new concrete bulkhead at their facility, the Texas City, TX-based pile-driving contractor knew it had its work cut out for them.

“The original bulkhead was built sometime before World War II and was failing both horizontally and vertically,” explained Randy Dietel, president of Piling, Inc. and a PDCA vice president.

“One of the main difficulties was that there were no plans left of the original bulkhead, just some fragmented sections. The Texas City disaster (see sidebar on page 12) of April 16, 1947 destroyed, not only the plans, but also claimed nearly 500 lives. It was considered the worst man-made disaster in the U.S. until 9/11.”

Dietel and his team began the daunting task of a preliminary conceptual design in September, 2001.

“This design was a king pile/sheet pile system between 18-20 feet in front of the failing concrete bulkhead,” he says.

“The next phase was to get a structural engineer to review the concept. The petrochemical company was in the process of looking at alternative usages of one of their docks and the design was to have 40 feet of water depth.”

Piling, Inc. sought the advice of a local dive company for information on the existing concrete bulkhead. It then employed a soil-testing company to determine the soil parameters that they would be confronted with.

“After the review by the engineer, we found that the system would not meet the loads due to the depth of water and weakness of soil. We were also not able to develop a tie-back system because of the failing concrete wall. So, we began to look at alternatives.”

Piling, Inc. then proposed a cantilever designer where the components consisted of a 40-inch diameter x 117-foot-long pipe pile driven side-by-side. The pipe pile was connected by a small pipe/T-bar interlock system that was welded to each 40-inch diameter of pipe. The structural engineer and soil engineering company both determined that this system could
work with the proper backfill and rip-rap material to relieve stress on the pipe pile bulkhead.

“The new pipe pile bulkhead is now completed,” Dietel happily reports, “and all backfill is in place. A cap was placed on top of the pile. It consisted of 54 inches of continuous flat plate with rolled edges (to cover the front and back of the pipe pile). Each 40” diameter pile was filled with sand and the 6” diameter interlocks were filled with small rock from the mud line up to 3 feet below the water line and with concrete from there to the top.”

Piling, Inc. completed the nearly $2 million project this past September, having commenced construction nine months earlier in January 2003.

Dietel says one of the biggest challenges was dealing with the existing concrete bulkhead.

“The concrete cap on top was vertical, but the concrete sheet pile underneath were leaning out towards the ship channel. We had to develop a leak-proof closure from the last straight (new) pipe pile installed next to the old leaning concrete wall, which opened up to a 4-foot, 7-inch gap at the mud line.”

With the use of divers, Piling, Inc. developed a system of interlocking flat sheet pile and plating. A special interlock was created for some flat sheet pile to transition into the pipe pile interlock system. The flat sheets were put in short sections and welded. The sheets were driven into the mud line with the use of a special drive tool and a vibratory hammer.

He continues: “A 3" x 5" angle was bolted to the concrete wall and a made-to-fit, wedge-shaped piece of plate was welded to the last flat sheet pile and the angle. The solution to fixing the problem from the top of the existing concrete cap, down to 15 feet below waterline where the leaning concrete sheet pile began, was the easier of the problems. This ledge stuck out towards the channel 3½ feet. The problem was resolved with installing four pieces of smaller diameter pipe pile (10"-14" diameter) and welding corresponding sheet pile interlocks to each piece of these smaller pipe. The small pipes were secured to the underwater flat ledge with angle iron being bolted to the horizontal concrete ledge and welded to the pipe pile.”

While the project was definitely a challenge, Dietel says what he enjoyed most was being able to develop a solution for the petrochemical company’s very difficult problem. Even with the myriad of obstacles – no original plans left of the concrete bulkhead; a wall that was failing both horizontally and vertically; an existing pipe rack carrying all the products from the dock to their refining units, only a mere 15 feet behind the original bulkhead (blocking off access to the land side); and a new dock line that was only 18-20 feet in front of the existing bulkhead, Piling Inc. proved itself to be up to the task. The petrochemical company couldn’t be happier.
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Texas City Disaster Takes Nearly 500 Lives

The 1947 disaster in Texas City, TX was caused by a fire in the hole (compartments in the hull) of a ship called the “Grand Camp.” The ship was loaded with munitions and ammonia nitrate. (Ammonia nitrate is used as a fertilizer, as well as constructing explosives).

The fire was presumed to have been started by a cigarette, which was either tossed, or fell, into the hole. The captain first ordered the hatch covers closed in order to smother the fire. This was standard procedure, but did not work. Next, they opened the hatch covers and attempted to put the fire out with water. By that time, the fire department had arrived and was using fire trucks to pump water onto the fire.

However, this failed as well. The water was causing a reaction with the fire and heat, which consequently built up in the hold causing a continued chain reaction, followed by an explosion. The whole waterfront was ablaze.

Almost the entire fire department was killed. Many bystanders were also killed or wounded. One of the anchors from the ship was found almost a mile away.

Approximately 10 hours later, a second ship, the “High Flyer” blew up. It was moored in a slip just to the south of the “Grand Camp.” It caused another set of chain-reaction explosions and more deaths.

Much damage was caused throughout the city. School children, homes, and businesses had steel shrapnel raining down on them. Windows and doors were blown out of their frames, and houses were knocked down by the shock waves.

The Red Cross and many communities, from as far away as Colorado, came or sent aid to Texas City.
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Whatever your piledriving needs are, Pileco can help. Whether the piles are above or below the waterline, inland or offshore, Pileco has the equipment to get the job done the first time out.

PILECO HAS THE EQUIPMENT YOU NEED
- Diesel, Hydraulic, or Vibratory Hammers
- Hydraulic Power Packs
- Drill Rigs
- U-Lead Systems
- Caisson Lead Systems
- File Helmets/Sleeves
- Spotters
- Earth Augers
- And Much More...

Pileco is a fully authorized repair/service center to help you keep your equipment in top operating order. If your equipment has been "retired" or is simply in need of a tune-up, give us a call to discuss a free inspection & estimate. In most cases, Pileco can repair or recondition your hammer for far less than the replacement cost of a new one.

- Pileco has your OEM parts and components to avoid costly downtime
- Pileco can provide custom engineering to assist you in providing problem solving solutions
- Pileco has custom fabrication & machine shop capabilities to provide you with the specialized equipment you need
- Service around the world: 24/7 – wherever & whenever you need us

Please call or stop in to visit with us.
We are here to help. You can rely on Pileco.
For more information or literature, please call us.
Polymeric Piles: A Cost-Effective and Environmentally Friendly Practice

With the return of marine borers such as Limnoria and Teredo to the cleaned up New York City Harbor waters, exposed wood piles along the shoreline of the city have deteriorated at an alarming rate.

With environmental concerns and questionable effectiveness associated with the use of wood preservatives such as creosote, CCA and the less toxic substitute treatments, alternate piling materials are needed for marine applications.

Polymeric materials is a cost-effective and environmentally friendly practice that has encouraged the development of innovative products. The reclamation of these materials, and the energy expended to renew them into products in the marketplace, has proven to be an efficient and worthwhile venture. There is current development of high-quality innovative products, such as structural plastic lumber and load-bearing piles made with polymeric materials. Several of these piling products have been subjected to full-scale field testing, such as static-pile load tests and dynamic monitoring during impact driving.

Some of these products are capable of withstanding the installation stresses and supporting axial loads to the same degree as piles made with conventional materials. These piles have a perceived best benefit in direct application for use in light applications in waterfront areas for piers, docks, and walkways. The initial cost of the polymeric piling material, when compared on a cost-per-ton basis, is greater than conventional materials. Therefore, a life-cycle cost analysis must be applied to determine the true value of using these materials.

The common polymeric products, in use today, are made with varying densities of recycled polyethylene mixed with randomly oriented fiberglass filler material. Products on the market consist of composite sections of steel or fiberglass-reinforcement cages molded within a matrix of polyethylene. Piles are also manufactured with just polyethylene and a fiberglass filler with foaming agents that are generally introduced to the core of the section to reduce the gross weight. Piles can be treated with UV protective and antistatic electricity agents, as well as flame retardants.

One type of polymeric pile, not made of recycled materials, is a concrete-filled structural fiberglass pipe. The fiberglass pipe acts as an external structural reinforcement for the concrete and provides the tensile and bending properties required for handling and impact driving of the concrete core. One product is manufactured by using a continuous roving fiberglass filament that is wound on a steel mandrel.
This process allows the foundation engineer to specify a ribbed texture along a specific length of the pipe to increase the friction characteristics of the pile shaft.

A composite pile-testing program, funded by the Federal Highway Administration (FHWA) and administered by the Empire State Development Corporation (ESDC), was undertaken at the Port of Newark, in Elizabeth, N.J. Five pile manufacturers participated in the program which involved impact driving of the piles with a variable stroke hydraulic hammer, monitoring installation with dynamic pile testing and conducting static pile load tests. Laboratory testing was conducted to determine the static elastic modulus of the composite pile sections, along with tests to evaluate long-term creep under varying temperatures. Analytical methods are being adapted and developed to predict long-term creep behavior of plastic materials.

For the most part, the piling products at the Elizabeth test site withstood the installation stresses and were able to be driven to the design toe elevation. There was fair correlation between the dynamic and static testing data for the composite polymeric piles and the capacities were comparable to those expected from conventional piling materials.

In a wetland mitigation project along the shore of the Harlem River in New York City, the New York State Department of Transportation (NYSDOT) used concrete-filled fiberglass pipe piles to support a pedestrian bridge and viewing platform. A specification was written, with special provisions for a structural fiberglass pipe filled with concrete and the piles that became a bid item in the contract. During construction, the pile was subjected to the standard NYSDOT material and pile installation review process with field oversight by NYSDOT inspection staff. Dynamic pile testing was performed to monitor pile stresses, hammer operation and to evaluate the capacity. All piles were driven to the design toe elevation, without damage, and the required capacity was exceeded.

Further research is needed to accurately determine the overall wave speed of composite polymeric piles so that dynamic pile-testing results can be used with confidence. The cost for field verification of these piles would become prohibitive if dynamic pile-testing methods could not be applied and static pile load testing became the only alternative.

As these products continue to be developed, a growing advantage will be the ability of the foundation engineer to optimize the foundation design by tailoring the pile properties to the subsurface conditions at each project location. ASTM draft standards for structural grade plastic lumber and polymeric piles are currently under development, with both standards closely approaching initial balloting.

Stephen L. Borg is a supervisor of a structure foundation squad in the geotechnical engineering bureau for the New York State Department of Transportation in Albany. He began work with the department in 1985. He supervises engineers in the design and construction of bridge foundations and earth-retaining structures and supervises the preparation of foundation reports, contract specifications and subsurface soil profiles. He heads the High Strain Dynamic Pile Testing program for the department and is responsible for the implementation of nondestructive testing methods for quality control of drilled shafts and determination of unknown foundation lengths. In addition to his department duties, he has served on an FHWA-funded composite pile-testing program committee, ASTM committees on plastic lumber and polymeric piles, and has published papers related to deep foundations and the application of stress-waves to piles. He is a registered professional engineer in New York and possesses a bachelor’s degree in civil engineering from the University of Massachusetts, Lowell.
Pile Testing Instrumentation

Geokon, Incorporated manufactures a full range of geotechnical instrumentation suitable for monitoring loads, strains and deformation in piles.

Geokon instrumentation employs vibrating wire technology that provides measurable, long-term advantages:

- Cut or splice cables without adverse effect on readings
- Proven long-term stability
- Remote datalogging possible
- DSP, noise-free data

Having three ICE pile driving tools at hand gave us the flexibility to complete this difficult project without any delay . . . .

W. "Junior" Hager, Piledriving Superintendent, Hal Jones Contractor, Inc.
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 project 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.
Nucor-Yamato Steel’s
HP8, HP10, HP12 & HP14,
PS and PZ Sheet Piling

PILING PRODUCT FEATURES

- CAST AND HOT ROLLED IN THE U.S.A.
- NATIONALWIDE PILING DEALER NETWORK
- SHEET PILES HAVE PREFERRED BALL & SOCKET INTERLOCK
- H-PILING AVAILABLE IN ASTM A572 GRADGES 50 & 60 AND ASTM 690
- SHEET PILING AVAILABLE IN ASTM A328, ASTM A572 GRADGES 50 & 60, AND ASTM 690

H-PILE SECTION SIZES

<table>
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<tr>
<th>Section Designation</th>
<th>Area</th>
<th>Width</th>
<th>Height</th>
<th>Weight (mass)</th>
<th>Moment of Inertia</th>
<th>Section Modulus</th>
<th>Surface Area</th>
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<td>50.0</td>
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<td>3.87</td>
</tr>
</tbody>
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*Note: Nominal coating area excludes socket interior and ball of interlock.

SHEET PILING TECHNICAL DATA

NUCOR-YAMATO STEEL PILING DEALERS

- Fargo Structural
  Fargo, ND
  (701) 282-2345
- Mid-America Foundation Supply, Inc.
  Fort Wayne, IN
  (800) 348-1890
- National Pipe and Piling, Inc.
  Tacoma, WA
  (253) 274-9800
- D.P. Nicoli, Inc.
  Tualatin, OR
  (503) 692-6080
- Husker Steel
  Columbus, NE
  (402) 564-3271
- J. D. Fields and Company, Inc.
  South Holland, IL
  (708) 333-5511
  Bethlehem, PA
  (610) 317-6304
  Houston, TX
  (281) 558-7199
- Skyline Steel Corporation
  Birmingham, AL
  (205) 262-9909
  Citrus Heights, CA
  (916) 863-6000
  Norcross, GA
  (770) 242-9007
  Tinley Park, IL
  (708) 444-0999
  Mandeville, LA
  (985) 624-3620
  East Sandwich, MA
  (508) 833-4600
  Earth City, MO
  (314) 739-1303
- Midletown, NJ
  (732) 671-5900
  West Chester, OH
  (513) 777-7039
  Pittsburgh, PA
  (412) 561-3995
  Pearland, TX
  (281) 992-4000
  Fairfax Station, VA
  (703) 978-2500
  Gig Harbor, WA
  (253) 858-9405

Steel H-Piling Dealer  Steel Sheet Piling Dealer
Step 1: Select Membership Type

I wish to apply for the following membership status (check one):

Contractor ($650/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 ($650/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

Title: Mr.  Mrs.  Ms.  Dr.  Prof.  Other

Business Title ________________________________  Business Phone ________________________________
Name ________________________________  Business Fax ________________________________
Company Address ________________________________  Primary Email ________________________________
Business Address ________________________________  Home Page ________________________________
City/State/Zip ________________________________

Step 3. Company Description (complete only the category for which you are applying)

A. Contractor Only Company Description (check all that apply):

Bridge Building
Bulkheads
Deep Dynamic Compaction
Deep Excavation

Docks & W Harves
Earth Retention
General
Highway & Heavy Civil

Marine
Pile Driving
Other ________________________________

B. Associate Company Only Company Description (check all that apply):

Accessories
Cutter Heads & Drill Bits
Dock & Marine Supplies
Hammer Cushions
Hoses & Fittings

Lubricants & Greases
Pile Cushions
Pile Points & Splicers
Rigging Supplies

Safety Equipment
Other ________________________________
### Applications Systems
- Aluminum Sheet Piles
- Coatings & Chemicals
- Structural Steel
- Synthetic Material Piles
- Other

### Steel Pipe Piles
- Steel Sheet Piles
- Vinyl Sheet Piles
- Other Structural Materials

### Timber Piles/Treated Lumber & Timbers
- Concrete Piles
- Composite Piles

### Coatings & Chemicals
- Steel Sheet Piles
- Concrete Piles

### Structural Steel
- Vinyl Sheet Piles
- Composite Piles

### Synthetic Material Piles
- Other Structural Materials
- H-Piles

### Equipment
- Air Compressors
- Cranes
- Drill Equipment
- Drive Caps & Inserts

- Hammers
- Hydraulic Power Packs
- Leads & Spotters
- Pumps

- Specialized Rigs & Equipment
- Other

### Services
- Consulting
- Design
- Freight Brokerage
- Geotechnical

- Marine Drayage
- Surveying
- Testing
- Trucking

- Vibration Monitoring
- Other

### General
- Rental
- Sales
- Other

### C. Technical Affiliate Only (check all that apply)
- Analysis
- Civil & Design
- Consulting
- Educational/Association

- Geotechnical
- Materials Testing
- Pile Driving Monitoring

- Surveying
- Vibration Monitoring
- Other

### Step 4. Geographic Areas Where Contracting, Products and Services Available
(All applicants check all that apply)

- All States
- CT
- ID
- MD
- NC
- OH
- TN
- WV
- AK
- DC
- IL
- ME
- ND
- OK
- TX
- WY
- AL
- DE
- IN
- MI
- NH
- OR
- UT
- Canada
- AZ
- GA
- KY
- MO
- NM
- RI
- VT
- Mexico
- CA
- H
- LA
- MS
- NV
- SC
- WA
- Global
- CO
- IA
- MA
- MT
- NY
- SD
- WI

### Step 5. Sponsorship: Who told you about PDCA?
- Member Name

### Step 6. 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
  - Card Number: Expiration Date: 
  - Name as it appears on card: Signature:

Please send this completed application to: PDCA
P.O. Box 19527, Boulder, CO 80308-2527 | Phone: 303-517-0421 | Fax: 303-443-3871 | www.piledrivers.org

Piledriver
The 2004 PDCA Winter Roundtable will be held February 19 - 21, 2004 at the Wyndham Orlando Resort in Orlando, Florida. The Winter Roundtable is the premier event of the Pile Driving Contractors Association. The Roundtable is for contractors, geotechnical and structural engineers, owners, developers, suppliers, academics, and anyone else who deals with and supports the pile driving industry.

The Winter Roundtable provides an opportunity for you to meet with your peers and industry leaders, from around the country, to discuss what's new in the industry, the needs of the industry, common problems, and possible solutions. Find out what is happening in other areas of the industry, too. A wide range of exhibitors will be on hand with information on a variety of products and services.

An outstanding line up of speakers has been assembled to cover a variety of topics related to the driven pile. Topics include Trends in Marine Pile Driving, Underwater Noise and Pile Driving, Sheet Pile Cofferdams, the Rising Cost of Insurance and indepth discussions of several driven major pile projects.

This year's conference will be held at the Wyndham Orlando Resort. The Wyndham Orlando Resort is located on International Drive, just minutes from Orlando International Airport, and near many of the famous Central Florida attractions, such as Walt Disney World, Universal Studios, and Sea World. Additional information can be found on the hotel's Web site located at www.wyndham.com/hotels/MCOWD/main.wnt. Room reservations can be made by calling (407) 351-2420. Ask for the PDCA Winter Roundtable Meeting room block.

The deadline for the guaranteed conference rate of $169 is January 28, 2004. After that date, rooms are on a space-available basis only.

Please plan to attend the PDCA Winter Roundtable. For more information and registration forms, please visit the PDCA Web site at www.piledrivers.org.

**Pre-Conference Short Courses**

**Thursday, February 19, 2004**

**9:00 – Noon**

**Pile Design for Non-Engineers**

Dr. George Goble teaches this session on the basic methodologies and terminologies of driven pile design. This course is intended for non-civil engineers working in the piling industry that would benefit from greater knowledge and understanding of the design process.

**1:00 – 5:00 PM**

**Wave Mechanics and Dynamic Pile Testing**

Taught by Mohamad Hussein, vice president of GRL Engineers, this course will cover pile types, installation equipment and methods, wave equation analysis background, and practical applications and the dynamic testing and analysis of driven piles.
PDCA 2004 Winter Roundtable Program

THURSDAY, FEBRUARY 19, 2004
9:00 – Noon
Short Course: Pile Design for Non-Engineers
Dr. George Goble

1:00 – 5:00 PM
Short Course: Wave Mechanics and Dynamic Pile Testing
Mohamad Hussein, GRL Engineers

Noon – 2:30 PM
Committee Meetings: Technical, Membership, Finance

2:30 – 5:00 PM
Committee Meetings: Education, Market Dev., Communications

6:00 – 7:30 PM
Opening Reception

FRIDAY, FEBRUARY 20, 2004
7:00 – 8:30 AM
Continental Breakfast

8:30 – 9:00 AM
8th Annual Membership Meeting
PDCA President Wayne Waters, Ed Waters & Sons Contracting Co., Jacksonville, FL, will discuss PDCA results for 2003 and plans for 2004 and beyond.

9:00 – 9:45 AM
Trends in Marine Pile Driving
Bob Bittner, President, Ben C. Gerwick. Designers are using larger piles for in-water bridge foundations, which allow the pile caps to be located off the bottom of the waterway. Mr. Bittner will discuss the development of a new type of cofferdam, the float-in cofferdam and illustrate the specific concept details with case histories.

9:45 – 10:15 AM
Break in Exhibit Hall

10:15 – 11:15 AM
Underwater Noise and Pile Driving
Dr. Robert Abbott of Strategic Environmental Consulting, San Francisco, discusses the impact of shock waves from marine pile driving on fish and methods and costs of mitigation.

11:15 – 12:00 PM
Hathaway Bridge Project
Bill Crittenden, Project Manager, Granite Construction, discusses the fabrication and installation of 60” diameter cylinder piles for this bridge replacement project in Panama City, FL.

12:00 – 1:30 PM
PDCA Project of the Year Award Presentation and Luncheon

2:15 – 3:15 PM
Building Contractor Market Share and Size by Raising the Bar
Chris Dumas, Senior Geotechnical Engineer, Federal Highway Administration, discusses how contractors can expand their market share and size by implementing more sophisticated designs and quality control methods.

3:15 – 3:45 PM
Break in Exhibit Hall

3:45 – 5:00 PM
The Rising Cost of Insurance
Brian Cooper, Managing Director and Allen Brooks, Senior Vice President, Arthur J. Gallagher & Co. will discuss the construction insurance and surety market, what factors are impacting insurance, where things are headed and what contractors can do about it.

5:00 – 6:30 PM
President’s Reception

SATURDAY, FEBRUARY 21, 2004
7:00 – 8:00 AM
Continental Breakfast

8:00 – 8:45 AM
The Remote Pile Driving Analyzer
Craig Christenbury, Chief Manager, Chris-Hill Construction Company reviews the costs and benefits of the use of the PAL-R remote dynamic testing device on four projects and describes how it compares to ASTM and static testing.

9:30 – 10:00 AM
Break

10:00 – 10:45 AM
Oakland – San Francisco Bay Bridge Approach Skyway Project
Presented by Kiewit/FCI, this $1.1 billion project involves the use of 8’ x 300’ steel pipe piles and a precast segmental structure.

10:45 – 11:30 AM
Orlando Airport Project: The Benefits of Pile Setup
Wayne Waters, Ed Waters & Sons Contracting Co., presents a case study involving piling foundations for a new passenger transit system at the Orlando Airport. A significant savings of time and cost was realized due to the use of set-up to achieve required pile capacities at relatively shallow tip elevations.

11:30 – 12:00 PM
Roundtable Discussion: Competitive Advantage from Pile Setup

1:00 – 5:00 PM
PDCA Board of Directors Meeting
Calendar of Events

February 19-21, 2004
8th Annual Winter Roundtable Conference
Wyndham Orlando Resort
Orlando, Florida

September 16-17, 2004
5th Annual DICEP Conference
Sheraton Gateway Hotel
Los Angeles, California

Pile Testing Consultants
Dynamic Pile Testing, PDA
Static Pile Testing
Pile Instrumentation
Pile Driving Consulting
PO Box 58621
Salt Lake City, Utah 84158
Phone: 801-566-9581
801-330-0527

GZA GeoEnvironmental, Inc.
CONTRACTOR SUPPORT SERVICES
One Edgewater Drive
Norwood, MA 02062
781-278-3700
www.gza.com

- Dynamic Pile Testing (PDA)
- Static Pile Testing
- Wave Equation Analysis (WEAP)
- Cross-hole Sonic Logging (CSL)
- Vibration Monitoring
- Deep Foundation & Geotechnical Instrumentation
- Pre- & Post-Construction Surveys
- Foundation and SOE Design
- Subsurface Exploration
- Foundation Qa PDA Certified Operators

FOR EDITORIAL QUESTIONS, PLEASE CONTACT
Lisa Kopochinski, Editor,
(800) 481-0265 or
lisa@lesterpublications.com
Experience the progress.

Experience the Progress with Liebherr: Liebherr Piling and Drilling Rigs are multi purpose machines for any deep foundation application. Advanced Technologies are our Business.

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Fax: (281) 2197134
www.liebherr.com

LIEBHERR
The Group
WWPI's Best Management Practices (BMPs) are designed to protect your treated wood investment from harsh marine conditions while minimizing risk to sensitive environments. BMP treated wood products are mandated by many Federal and State agencies.

BMPs provide technical guidance on wood preparation and treating procedures, post treatment processes, inspection and installation. BMP treated wood products are designed to minimize the amount of preservative and provide a clean and dry product while assuring the long service life that comes with conformance to AWPA Standards.

Always specify only BMP products and require independent third party inspection certification by certificate or the presence of the BMP Quality Assurance Mark.

For your next aquatic project, protect your investment and the environment, require the material be treated and identified according to BMP Standards.

Visit our website for a complete guide on using treated wood in aquatic and wetland environments and the BMPs.
When the pile driving industry in South Carolina began to suffer, Harry Robbins had an idea that would bring local pile drivers together. He helped start the Pile Driving Contractors Association of South Carolina, which was officially chartered on April 1, 2003.

“The pile driving market in coastal South Carolina was shrinking. Our market share was being eroded by ground modification, augered systems, caissons, etc. Those who sell these alternative systems were doing a much better job of marketing their products than we were. It occurred to me that we could pool our resources through a local chapter and collectively market our product, which is driven piles, to local owners and designers,” he explains.

The chapter meets quarterly and currently has 23 members that include pile-driving contractors, structural engineers, geotechnical engineers, material suppliers, equipment suppliers, and a trucking firm.

“PDCA gives me the opportunity to more effectively market my product than I could do on my own,” Robbins says. “I believe that driven piles are the best option for a proven deep foundation system. Working through PDCA is a more effective way to share this message than trying to do it alone.”

Robbins believes that establishing more local chapters can be beneficial in promoting driven piles at the grassroots level.

“PDCA can support this local effort by providing educational support for local engineers. This support can be in the form of technical papers that favorably address pile driving issues such as vibration and noise. This support can also consist of technical guidance on how to design driven piles to meet the International Building Code.”

Robbins, 53, graduated from The Citadel in Charleston, South Carolina, with a bachelor of science degree in business administration.

After graduating, he worked for eight years in the underground utility business. In 1980, he began working for Palmetto Pile Driving Inc. as project manager and, in 1983, he was promoted to vice president and general manager. Six years ago, he started his current position as president.

“A president of Palmetto Pile Driving Inc., I’m responsible for the overall operation of the company,” Robbins explains. “This includes estimating, project management, marketing, personnel, etc. We are blessed with a strong core of long-time, quality employees.”

Palmetto Pile Driving Inc. installs any type of conventional driven piles for foundations on land. The company also manufactures prestressed concrete piles, which it produces for clients and distributes to other pile driving contractors.

The type of projects it is involved with includes hospitals, schools, office buildings, parking garages, manufacturing plants and water treatment facilities.

“We have a solid, conservative approach to business. Our primary area of interest is coastal South Carolina. Huge projects for us do not come along every day. This means we strive to be the best in our area at driving piles for office buildings, schools, etc. when we are fortunate enough to have the opportunity. When an unusually large project does come along, we expand to take care of that project with little
As far as safety and environmental issues go, Palmetto Pile Driving works hard to prevent any problems. “In historic Charleston, there is a concern for the effects of pile-driving vibrations on old and historic structures. Often the perception is that construction activities, and especially pile driving, will cause problems. The construction team’s job is to make certain that perceived problems do not become actual problems.”

Some of the procedures they use, to ensure safety, are surveys of the existing conditions by geotechnical engineers, setting vibration limits, preaugering, using a clean-running, hydraulic-powered hammer with a variable stroke, and doing a post-pile driving survey using the same geotechnical engineer. These procedures all ensure that vibrations will not harm existing structures.

Robbins has a corporate philosophy that ensures his company’s success: “Do it safe. Do it right. Do it fast. But always, do it in that order.”

To keep abreast of technology issues, Robbins reads trade journals and attends trade conferences where he gains much information from equipment vendors, suppliers, engineers, and peers.

Robbins has a corporate philosophy that ensures his company’s success: “Do it safe. Do it right. Do it fast. But always, do it in that order.”

He’s also been involved in various national and local organizations during the course of his career. As president of PDCA’s South Carolina chapter, and a board member of the national PDCA, Robbins has also been a member of the American Subcontractors Association and the ASA Charleston chapter since 1979 and held several offices over the years. He is a member of Charleston Contractors Association and the Charleston Area Civil Engineers Club. From 1991 to 1994, he was a member of the PCI Prestressed Concrete Piling Committee.

In his free time, Robbins is an active member of the Exchange Club of Charleston.

“The Exchange Club of Charleston owns and operates the Coastal Carolina Fair,” he says. “Through our efforts with the fair, we are able to make substantial contributions to local charities. Last year, our club donated over $425,000 to Charleston area charitable organizations.”

Robbins also enjoys spending time with his wife Cyndi and their two daughters Jolee and Elaine. Some of his favorite pastimes include running with Luke (his Australian Shepherd), boating, kayaking, and playing golf.

As far as his career goals, he says, “This is what I do. I only want to do it better.”
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REQUEST FOR PHOTOS

Attention PDCA members. Piledriver magazine is on the lookout for any interesting photos you may have. We’re looking for fairly generic pile-driving images that we can print in upcoming issues. If they are digital, they need to be saved in either a TIF, JPG or EPS format at 300 dpi and should be at least 4 x 5 inches in dimension. If they are actual hard copy photos, please mail them to:

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This May, L.B. Foster Company’s Piling Division received a Supplier of the Year Award from the Union Pacific Railroad.

Regarding Foster’s service, the Union Pacific announcement stated, “This supplier exemplifies many of the ideals of customer service. Their on-time delivery report card is simply astounding given the relatively short lead times and numerous changes in project timing and requirements.

“The L.B. Foster team’s commitment to the UP RR is best illustrated by their reaction to the 2002 Sharon Springs casualty. Friday night the UPRR Maintenance Track Manager contacted L.B. Foster via a pre-established UP emergency phone number. The Foster crew swung into action immediately, putting the customer’s needs first, expediting loading and trucking, pushing past normal communications and paperwork procedures. By Saturday afternoon Foster delivered the necessary piling to the job site. Right material, right timing, right supplier.

“L.B. Foster Piling succeeds at the old adage ‘the customer is king.’ With a spotless track record, a remarkable sense of urgency and a businesslike vision for the future, this company deserves to be a 2002 Supplier of the Year.”

L.B. Foster is deeply committed to providing the UPRR, as well as all of our customers, with the products and services they need, on every level, to assure continued successful operation of their business. For more information on all of our piling products, including hot rolled Z-pile, H-pile, pipe pile, and more, call us today at 1-800-255-4500, e-mail us at info@fosterpiling.com or visit us at www.fosterpiling.com.