Building on a proud history
PCL reaches new heights in Colorado

ALSO INSIDE
Expanding our global supply reach
Nordic joins PCL in Hawaii
PCL Industrial ramps up
After several successful projects with key customers in Colorado’s Rocky Mountains and with numerous projects underway, PCL has opened up an office in Edwards, Colorado, just west of Vail. We owe some of our success in Colorado’s mountain resort areas, interestingly enough, to a courageous group of soldiers who took combat to new heights.

PCL soldiers on in Colorado’s

History of the US military in Colorado’s Rocky Mountains
More than sixty years ago during the height of World War II, the US military set up the 10th Light Division (Alpine), at Camp Hale in Colorado’s Rocky Mountains. The later renamed 10th Mountain Division soldiers trained in mountain and winter warfare at the 9,200-foot-high camp honing their skills to fight and survive under the most brutal mountain conditions. The Division entered combat in 1945 in the mountains of Italy and led the Allied Forces to many battle successes. These successes began a remarkable piece of American military history as the tactics employed by the 10th Mountain Division have been used and enhanced for US military success ever since.

Veterans first to build in Colorado Rocky Mountain resort areas
Interestingly enough for the tourism industry, it is the ex-soldiers from the 10th Mountain Division that set the foundations for this remarkable recreational and tourism area by designing and laying out ski hills, building lodges, designing ski lifts, and even improving alpine equipment. Vail, Aspen, Sugarbush, Crystal Mountain, and Whiteface Mountain are only a few of the ski resorts started by 10th Mountain Division veterans.

PCL’s own Mountain Division
Our history in Colorado’s Rockies goes back to the late 1980’s and early 1990’s when we built the St. Regis Aspen, formerly known as the Ritz-Carlton Hotel. Now more than fifteen years later and with all due respect given to the soldiers that trained and fought for the United States, it is with great pride that PCL Construction Services, Inc. out of Denver opened a satellite office in Edwards to better serve our customers in the area.

Ritz-Carlton Residences at Vail
Our work at the Ritz-Carlton Residences at Vail includes a 564,000 square-foot shared unit complex, complete with health club facilities, Ritz Club facilities, 117 living units, a swimming pool, saunas, and parking garages.

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Owner: RCR Vail, LLC – Vail Resorts, Inc.
General Contractor: PCL Construction Services, Inc. (Denver Mountain Division)
Primary Consultant: 4240 Architecture/Glover Smith Bode, Inc.
Projected Value of Contracts: $195 million
Construction Schedule: June 2007 to August 2010
Rocky Mountains

The Viceroy at Snowmass Village
In a joint venture with CFC Construction, PCL is serving as construction manager on this high-profile project in Snowmass Village near Aspen. The 425,000 square-foot complex will include 186 hotel/condo units, a full-service spa, restaurants, and conference facilities, and is part of a $2-billion development known as Base Village at the Snowmass Ski Resort.

In June 2008, PCL Construction Services, Inc. (Denver Mountain Division), and joint venture partner CFC Construction, were awarded two new construction management contracts encompassing five new buildings in Phase 3 at Base Village Development. Three of these buildings are low-rise condominiums with selective retail and skier services and the other two are The Little Nell Hotel and Residences, a five-star hotel and condominiums.

COVER PHOTO: The Viceroy at Snowmass Village

Diversifying PCL's Presence in the Mountains
Although our foothold in the area is due to the large building projects mentioned in this article, we are demonstrating that PCL can build all sorts of projects in many shapes and sizes. We are presently also working on:

Aspen: The $2-million Aspen Gondola Plaza Remodel and $500,000 Aspen Sales Office.

Snowmass: The $3-million Woodrun Watertank and Waterline, the $3.1-million Main Street Bridge #2, a $1-million custom condominium build-out called Unit 410, and the $2-million high-end nightclub Junk/Liquid Sky.

In the Preconstruction Phase:
- Glenwood Meadows Office Building (West Glenwood Springs): $20 million
- Evervail mixed-use development (Vail): $700 million
- Snowmass Center mixed-use development (Snowmass): $500 million

One Ski Hill Place at Breckenridge
One Ski Hill Place features eighty-eight whole ownership ski-in-ski-out condominiums at the base of Peak 8. Other amenities include a conference center, aquatics center, fitness center, two-lane bowling alley, media room, and a restaurant.
For more than a century, PCL has directly procured many of the products and materials needed to build its projects. As part of this process, we have been buying granite, marble, and tile offshore for decades, but until now, the vast majority of construction products were obtained through North American suppliers. Today, with the dramatic expansion of global supply markets, PCL is at the forefront of the tremendous opportunities available by sourcing from markets worldwide, bringing increased value to our projects, and cost savings to our clients.

**PCL expands its product supply reach**

**Proactive, integrated approach helps manage risk**

Managing risk is fundamental to the success of any construction project, and the procurement of products and materials is a key part of the construction risk matrix. As procurement activities extend further afield, new risks are introduced that require unique skills and knowledge to effectively manage.

At PCL, we have adopted a proactive, integrated approach to managing risk in our global procurement program. We have developed risk identification procedures to assist our clients in determining whether their projects are appropriate for global procurement, and risk mitigation strategies to manage the procurement activities we undertake.

**Access to global markets lowers cost**

Global supply markets continue to evolve at an unprecedented pace. The most competitive offshore sources for many construction products are now concentrated in China, South East Asia, and Eastern Europe – in many cases offering top-quality products at a fraction of the cost of the North American equivalents. These newer markets complement our portfolio of traditional supply markets that PCL has typically accessed in the past. With new vendors being identified continuously, PCL and its clients are well-positioned to benefit from a truly global marketplace.

**A world of options for your project**

As PCL expands its worldwide supply reach, we offer an increasing selection of vendors and products. We are broadening our knowledge of supply opportunities beyond architectural products to now include fixtures, high-end structural materials, and fabricated specialty items that meet our project requirements. Through the course of each procurement assignment, we are discovering new applications where PCL’s offshore procurement capabilities will benefit our projects.

As we continue to identify additional quality offshore vendors, the choice of products becomes almost limitless and cost competitiveness increases. Products previously considered rare and exotic for North American applications are now much more available and affordable.
PCL’s global procurement system, specialists, and advisors

In response to the dramatic increase in customer demand for global procurement for their projects, we have developed unique systems and tools, and have structured our organization to deal with this challenge.

PCL’s global procurement specialists use these tools to help guide our projects through their offshore sourcing activities, identifying and qualifying vendors worldwide, and sharing our experiences and knowledge throughout the PCL family of companies.

Our specialists further strengthen our global procurement capabilities by coordinating the efforts of a select group of global procurement advisors who work directly with PCL district staff on specific procurement assignments. These advisors truly are PCL’s “feet on the street” around the world, and provide the special training, work experience, and language skills essential for working effectively in their local markets.

Working closely with PCL’s project management staff and the global procurement specialists, our advisors support PCL in offshore vendor management, inspection, logistics, and other activities essential to ensuring a successful global procurement transaction.

Overall cost savings for our customers

With the help of in-house global procurement specialists, professional advisors, and state-of-the-art procurement management software and procedures, PCL is able to maximize potential cost savings and mitigate the inherent risks in global supply.

Vancouver Convention Centre Expansion

- Supply of Basalt tile from Inner Mongolia resulted in a cost savings of 25% versus the domestic option
- Using PCL’s global procurement system when dealing with a porcelain tile supplier from China resulted in an improvement to the installation schedule in excess of one month

For more information on PCL’s global procurement capabilities, please contact the local PCL operation in your region.
With the increased demand to move product through PCL’s pipe fabrication shop and module yard faster than ever, PCL Industrial has invested the time and resources necessary to meet our customers’ needs.

**PCL’s Canadian heavy industrial fabrication shop and module yard**

**Improved welding processes increase productivity**

PCL’s leadership in the initiation of an industry taskforce on welding productivity is leading to more efficient industry welding standards and subsequent efficiency on our shop floor. Our dedicated Welding Research and Development department of highly-qualified welding specialists is supported by a team of industry-leading welding operators, managers, and supervisors.

This team performs thousands of welds each year covering everything from typical carbon and stainless steels to ultra-high strength, high temperature, and cryogenic alloys to exotics such as copper beryllium and proprietary materials. If it’s weldable, we can weld it. If there is a better and faster way to weld it, we will find it.

**Delivery time shortened through lean manufacturing processes**

By adopting lean manufacturing methods, we have reduced our fabrication shop production stream to 117 steps from 439!

Using the principle of Safety plus Scan, Sort, Standardize, Shine, and Sustain, our shop floor employees have reorganized their workspaces to be more organized and effective. Often-used tools are close at hand and this reorganization has reduced clutter and made the work place cleaner and safer.

Buffers have been eliminated and work in process has been reduced by implementing a new Material Pull System based in lean manufacturing. The result is improved agility and more responsiveness to changing customer requirements. It has also reduced the lead time required to produce a pipe spool and improved the management of priorities through the entire process from drawing preparation to final spool shipment.

*Lean manufacturing is a business philosophy that continuously shortens the time between customer order and shipment by eliminating everything that increases production cost and time.*
Enlarged module assembly yard increases laydown capacity

PCL's recent development of an additional forty acres of land north of our current thirty-two-acre module yard has increased our module assembly and material laydown capacity. The larger yard also allows us to be more flexible in meeting project needs and can be sectioned off to accommodate projects of various sizes.

Three major types of modules are constructed at PCL's facility:

- Pipe rack modules;
- Equipment or process modules (these modules are similar to pipe rack modules as they have a structural steel frame and piping, but they also include a variety of process equipment such as pumps, heat exchangers and vessels, and often, many valves); and
- Fully-commissioned electrical and instrumentation skids and buildings.

DID YOU KNOW?

PCL Industrial operates one of the largest and most sophisticated pipe fabrication facilities in Canada. The facility is 145,000 square feet with an annual welding capacity of 1.25 million diameter inches. The long fabrication bays of this facility easily accommodate the fabrication of module pipe spools, which are often over 120 feet in length as well as spools made with exotic material or large diameter components.

There are three fabrication bays at this fabrication facility:

- Stainless steel, alloy, and small diameter pipe fabrication;
- Pipe fabrication, up to 24 inches in diameter; and
- Large diameter fabrication (up to eight feet).

Next to come at our Canadian fabrication shop: we are currently testing our latest technology solution called the Industrial Production Management System. Within the next several months, we plan to equip our major shop workspaces with a real-time reporting system, eventually eliminating the transfer of paper drawings from the drawing room to the shop floor.

THAT'S A TON OF MODULES! Over the past decade, PCL Industrial has constructed over 2,000 modules for a total dollar volume of close to $500,000,000!
They say two heads are better than one, but in the PCL family of companies 3,500 heads are better than one so access to a continent-wide intellectual capital pool can be priceless.

Teamwork leads PCL Regina to pre-cast concrete first

Sometimes in 2006, the PCL Regina construction management team was faced with their largest pre-cast concrete job ever, at the Regina Provincial Correctional Centre. Three hundred and forty panels requiring almost 800 cubic meters of concrete. Such a job would usually be sub-contracted out by PCL Regina, but this project required the walls to be pre-cast on site.

Faced with the task of setting up this new process, the project team led by project manager Bob Stepp decided to reach out and ask for help from all of the other PCLers across the continent. Bob sent out a company-wide e-mail asking for input on his pre-cast work and received more than thirty responses within two or three days. “It was absolutely amazing. We even received a response from Ross Grieve (PCL’s president and CEO),” Bob exclaimed.

So along with construction manager Dave Marriott and a host of others, Bob formed a team and began the journey into the world of pre-cast concrete with Wil Painter and Jay Talah from PCL Construction Services, Inc. (Los Angeles) as their guides. “Wil and Jay, with their expertise in pre-cast concrete and their supplier contacts, were one of the main reasons we were able to get this off the ground successfully,” says Dave.

The PCL Regina team learned all about laydown, staging, and pre-casting areas; the pre-casting process including cure times and hoisting; on-site logistics requirements; troubleshooting tips; and more. All of this led to PCL Regina successfully completing their first large pre-cast concrete job ever over a twenty-six week period.

In the PCL family of companies, more than 3,500 construction professionals and staff from several independent operations share their valuable experiences through a variety of forums including an expansive intranet, QUEST bulletins, and e-mail.
Two construction organizations with long histories merge on the Hawaiian Islands to form a construction team that is already making waves.

**PCL joins forces with Nordic Construction in Hawaii**

When you combine Nordic Construction’s seventy years of construction excellence on the Hawaiian Islands with PCL’s one hundred years of construction excellence across North America, you are surely forming a blockbuster of a construction organization able to tackle almost any construction challenge.

So when PCL Construction Enterprises, Inc.’s president & COO Peter Beaupré and Nordic Construction, Ltd.’s president & CEO Glen Kaneshige shook hands earlier this year on PCL’s acquisition of Nordic, a business partnership that started more than a decade ago was formalized, forming one new team named Nordic PCL Construction, Inc.

What does this mean for PCL and Nordic customers building on the Hawaiian Islands?

- More service from a larger construction organization with more resources to meet customer needs;
- More diversification in size of projects as we can now build more small and medium-size projects;
- More construction talent all on one team; and
- More self-performed work on projects, as Nordic has traditionally self-performed concrete and carpentry work.

PCL and Nordic since 1994

PCL and Nordic got together on our first joint venture in 1994 with the construction of the Hawaii Convention Center. Since then, we have teamed up on many other successful projects, including the Kahala Nui Senior Living Community, multiple phases for Marriott Grand Vacation Club’s Ko Olina Beach Club, the Keola La‘i Condominiums, and The Residences & Ritz Carlton at Kapalua Bay.

"Both companies have a long, proud heritage, which makes this acquisition very exciting," states Glen Kaneshige, former president and CEO of the former Nordic Construction, Ltd. and now executive vice president of Nordic PCL. “Although the two companies have different backgrounds, we share many of the same core values, and our cultures are very similar. Nordic and PCL both believe in integrity, respect, leadership, excellence, passion, building relationships, and ohana [family].”

Wayne Melnyk, former vice president and district manager of PCL Construction Services, Inc. (Hawaii) and new president of Nordic PCL says, “This acquisition is somewhat different from recent PCL acquisitions in that we already have a significant and successful relationship with Nordic.”
With the increasing demand to replace, repair, or improve North America’s aging infrastructure, PCL’s civil infrastructure operations spreads its wings by expanding to the Pacific Northwest.

PCL expands civil infrastructure operations to Pacific Northwest

When some of our people from the PCL Civil Constructors, Inc. team from Tampa, Florida brought their unique segmental bridge construction expertise north to work with the PCL Construction Services, Inc. team from Seattle on the $275-million Sound Transit Link Light Rail Project Section C755, they weren’t entirely sure how long they would be in the area.

Well … our civil team from Tampa fostered such great new relationships with the local building community on the Seattle light rail project that they decided to stick around. As with many other parts of North America, several infrastructure construction opportunities are on the horizon in the Pacific Northwest.

Patrick Malone, a 20-year PCL heavy civil builder, and Chris Stack, an 18-year PCL veteran, lead up our newest civil initiative working as PCL Construction Services, Inc. in Seattle. Patrick, the operations manager, and Chris, the chief estimator, have used their light rail experience to lead their successful Sound Transit team in this new endeavor.

The new team is pursuing projects in the area including bridges and highways, transit systems, and other civil infrastructure projects.

More to come

PCL Civil’s move to the Pacific Northwest is our latest response to the increasing need for civil infrastructure construction expertise across the continent. As has been our tradition for more than one hundred years, the PCL family builds where our customers need us to build. If you want to speak to us about your civil infrastructure needs, please contact the nearest PCL company to you.

BIG DOLLARS REQUIRED FOR AMERICAN INFRASTRUCTURE

The American Society of Civil Engineers estimates that $1.6 trillion is required in federal, state, and local funds for infrastructure construction (Engineering News Record, August 2007).
PCL’s Code of Conduct

In 1948, our founder Ernest Poole wrote a set of business principles to help sons John and George as they prepared to take over the company. These principles, known internally as Poole’s Rules, laid the foundation for our ethical culture. The four principles listed below are timeless, in terms of their relevance to business operations today and in terms of their importance to our reputation as a construction leader.

• Encourage integrity, loyalty, and efficiencies.
• Be fair in all dealings with owners, architects, engineers and sub-contractors.
• Keep your word as good as your bond.
• Be firm, fair, and friendly.

Over the years, the Poole’s Rules have evolved into a formal mission and values, which have been communicated across our companies, across the continent.

In 2007, to reinforce our commitment to legal and ethical conduct, we introduced the PCL Code of Conduct. The code, which also references many newly updated business policies, provides employees with documented legal and ethical guidance that will support them in today’s challenging work environments.

“One of the key factors to our success over the past century has been our reputation for integrity and fair dealings. Our reputation continues to be one of our most valuable assets as we look forward to our next century of business,” says Ross Grieve, president and CEO of PCL Employees Holdings Ltd.

In spring 2008, our code was ranked by Ethisphere magazine as the best among US contractors’ codes. With an A-, the highest mark on the list, the PCL code was recognized for excellence in eight independently judged categories, including public availability (A+), tone from the top (A+), and readability and tone (A).

The new code, along with our well-established business systems and procedures, stands as a testament to the longstanding commitment of our organization to legal and ethical dealings.

“The stylized ripple that you see throughout the PCL Code of Conduct is a symbol of our commitment to legal and ethical conduct. Like a stone thrown in a pool of water, we acknowledge that every one of our actions has a ripple effect that spreads outward, impacting others along the way.
PCL FAMILY OF COMPANIES

Our operations are carried out by a number of independent companies which operate in different construction markets or geographic areas.

Buildings

Our full-service buildings operations support the work of project sites across North America. This network of construction professionals rises to the challenges associated with our extensive buildings portfolio, bringing added value to every commercial, institutional, educational, and residential project. While we’re better known for our larger projects, such as airports, sports facilities, and office towers, we also excel at smaller unique projects, such as renovations, restorations, and repairs.

Industrial

Our industrial companies, which are located strategically throughout North America, respond to the unique construction needs of our clients in the petrochemical, oil and gas, refining and oil sands, mining, and power and cogeneration industries. In addition to offering Construction Management services, we offer a full range of general contracting services, specializing in mechanical, civil, and electrical construction; pipe and vessel fabrication and module assembly; and piping and plant shutdowns/turnarounds.

Civil

By nature, civil work is geographically diverse and extremely demanding. This has made us versatile civil builders — equally at home building on land or over water, in busy cities or in remote areas. Our civil teams possess the ingenuity and the experience needed to undertake any civil structure imaginable — from bridges, overpasses, tunnels, and interchanges to water and wastewater facilities, pipelines, and light-rail transportation projects.