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ARCHITECT'S JOURNAL

THE PATENT-PENDING BUILDING SOURCE HEATING/COOLING SYSTEM

DEVELOPED BY CHAD PHILLIPS

Phillips Architecture & Planning, Inc. is proud to introduce you to a new era of energy efficient heating and cooling systems. This invention's patent-pending design was developed by Chad Phillips. The product relates generally to heating and cooling systems for structures such as homes and commercial buildings, etc. and more specifically to such structures utilizing a heating/cooling system with a heat pump utilized in a more efficient manner.

Background of the Invention

Heating and cooling systems that utilize a buried ground coil through which a medium passes for heating by earthen material are typically called "geothermal systems." Briefly described, geothermal heating and cooling systems circulate a fluid heating medium through coils of tubing that are buried in the ground or immersed in a pond. The earth acts as a source of heat; the fluid is heated as it is circulated through the coils in the ground and is then pressurized prior to flowing through a heat exchanger such as a heat pump, which may be of the liquid-to-air type or liquid-to-liquid type. The heat derived in the heat pump from the relatively warmed fluid is used to heat a structure. The fluid, cooled by passage through the heat exchanger, is directed back to the buried ground coil where it is again warmed by the heat retained in the earth.

There are of course many variations on this basic theme. Some geother-

Inside this issue:

"Early estimates of savings over conventional systems can be 40—80% depending on the local utility rates and types of fuel used."

Chad Phillips

mal systems are of the "closed" type, where the loops that circulate the heating medium are in a fully close loop that is buried in the ground. Other systems are "open." In an open loop system, ground water is pumped through a geothermal heat pump where heat is drawn off the liquid. The relatively cooled water is then discharged into a pond. As noted above, a "geothermal" system may also contemplate immersion of the coils in a pond. In this sense, a body of water also acts as a heat source that may be utilized to warm the medium that flows through the coils.

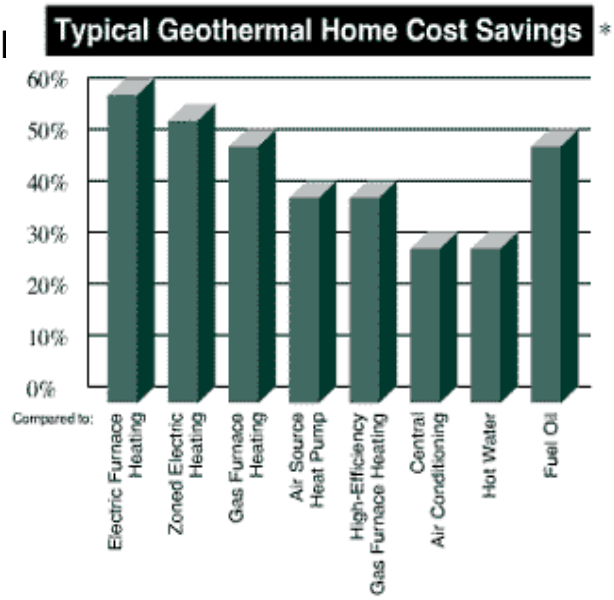
Welcome Aboard! We appreciate the opportunity to bring your ideas to fruition!

- Aspen Title & Escrow—Klamath Falls, OR
- The Barg Residence—Sunriver, OR
- The Garrigan Remodel—Bend, OR
- The Hanson Remodel—Sunriver, OR
- The Harcourt Residence—Redmond, OR
- The Hatfield Ranch—Brothers, OR
- The James Residence—Powell Butte, OR
- The Keller Residence—Bend, OR
- The McFarlane Residence—Redmond, OR

Projects that are currently under construction.

- Plaza Condominiums–Dalke Construction
- Redmond Four Square Bldg–Central Oregon Builders
- Karnopp Peterson LLP

In addition to geothermal heating and cooling systems, conventional electric heat pumps are used ubiquitously because all of these kinds of units help make usage of energy more efficient. Nonetheless, as energy resources become more scarce,



* Actual saving may vary depending on usage, weather, and local utility rates.

and as demand for energy increases, there is a substantial need for heating and cooling systems that use energy more efficiently. As a corollary, as energy becomes more expensive the demand for energy-efficient heating and cooling systems increases as a matter of economics: the less energy that is used, the less the cost of purchasing the energy.

Today there is a significant need for efficient heating and cooling systems for homes and buildings.

Summary

Chad's invention is an improved method and apparatus for efficiently heating and cooling a structure such as a residence, commercial building, etc. The system utilizes a closed loop system similar to a closed loop geothermal heating system but locates the coils in a more effi-

ON THE DRAWING BOARD

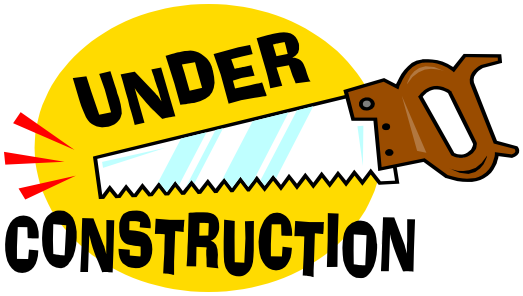
Welcome Aboard! We appreciate the opportunity to bring your ideas to fruition!

- Baccetti Residence—Whidbey Island, WA
- Aspen Title & Escrow—Klamath Falls, OR
- The Barg Residence—Sunriver, OR
- The Hanson Remodel—Sunriver, OR
- The Harcourt Residence—Redmond, OR
- The Hatfield Ranch—Brothers, OR
- The Keller Residence—Bend, OR
- The McFarlane Residence—Redmond,
- The Lantis Remodel—Bend, OR
- The Tamarack Homes—Sisters, OR
- The Price Residence—Prineville, OR
- The Shaker Residence—Sunriver, OR
- The Troike Residence—Sisters, OR
- The Neal/Boro Multi-family Projects—Prineville, OR & Southern Oregon Coast
- The Fordham Remodel—Bend, OR
- The Tovar Remodel—Bend, OR
- The Ruiter Multi-Family—Bend, OR
- The McColgan-Ahmed Remodel—Bend, OR
- Willett Properties Commercial Office—Redmond, OR

PROJECT COMPLETIONS

Please join us in Congratulating the following people on a job well done in completing their homes!

- The Neely Residence–Gary Norman Homes
- The Orner Residence–Owner/General
- The Seelhorst Residence–Powell Builders
- The Moore Remodel–Fall River Builders
- The Wann Residence–Owner/General
- The Snow Residence–Kimble Enterprises
- The Schreiber Residence



These projects are currently under constructions:

- Nicholson Remodel–Brad Nicholson Construction
- Plaza Condominiums–Dalke Construction
- Redmond Four Square Bldg–Central Oregon Builders
- Karnopp Peterson LLP Office Remodel–SunWest Builders
- Blankenship Triplex–Dan Blankenship
- Belser Residence–
- Bott Residence–Brad Nicholson Construction
- Snekvik Residence–Owner/General
- Hartsfield Remodel–Gary Molsworth Construction
- Sampson Residence–
- Garrigan Remodel–Ryan Grant Construction
- Steindorf Residence–Gary Molsworth Construction
- Koepke Garage Project–
- J. Johnston Residence– Paragon Homes
- Deschutes Co. Title TI–Andy Johnson Construction
- Hamond Residence–Seibold Building Solutions
- Staver Residence–John Howcroft Construction
- James Residence–Owner/General
- Logan Residence–Owner/General


The Bott Residence—Brad Nicholson Construction


The Hamond Residence—Seibold Building Solutions
AAC Block Construction


The Plaza Condominiums—Dalke Construction

The Phillips Architecture "GREEN TEAM"

AAC Block Construction

Barg Residence
Baccetti Residence
Hamond Residence
Hatfield Ranch
James Residence
Price Residence
Shaker Residence

Solar-Electric Systems

Glick Residence
Hatfield Ranch
Shaker Residence
Price Residence

Green Roof Systems

Neal Multi-family Projects
Plaza Condominiums
Price Residence

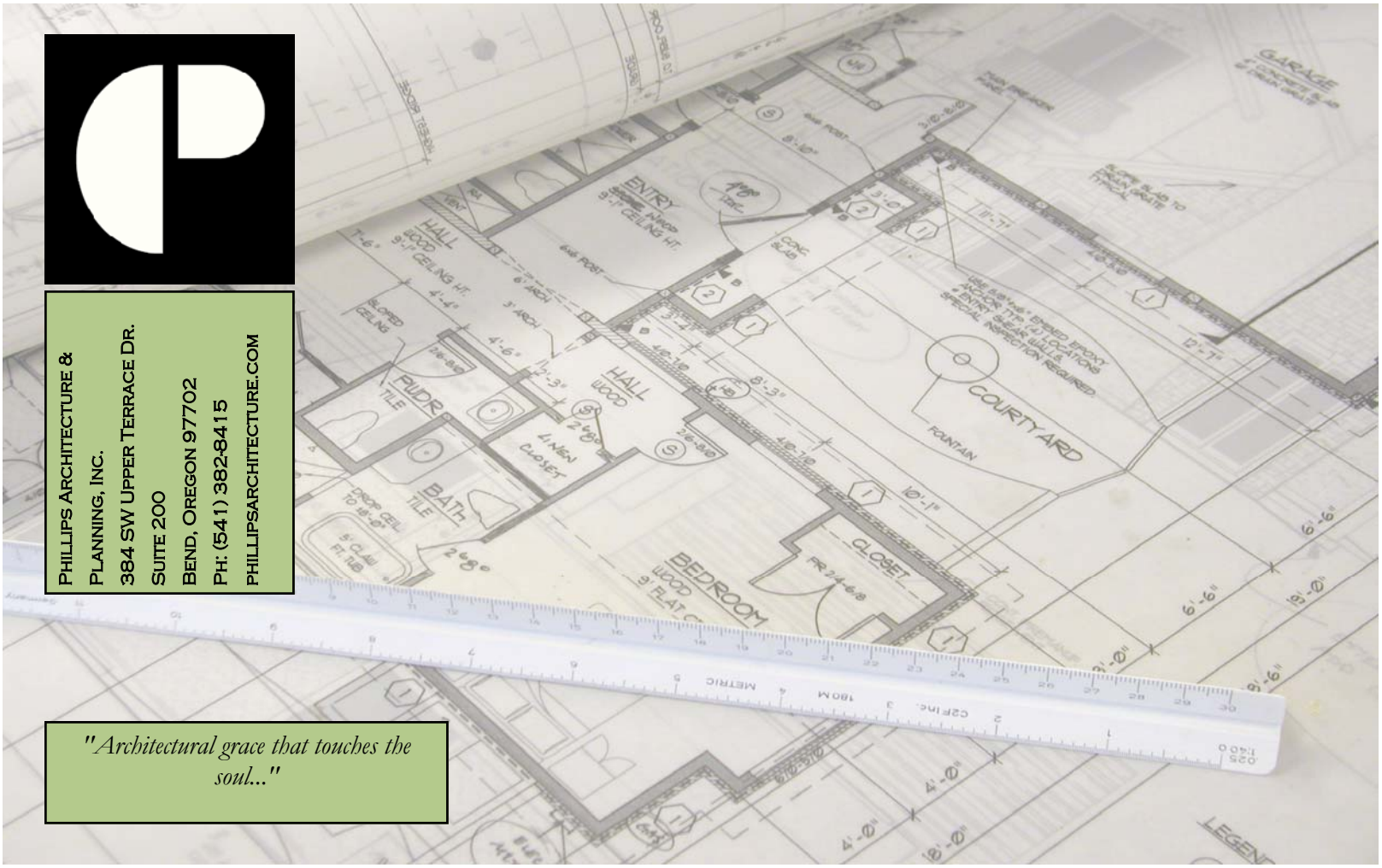
Building Source Heating/Cooling System

Baccetti Residences
Barg Residence
Harcourt Residence
Shaker Residence
Price Residence

Solar Hot Water Systems

Glick Residence
Hatfield Ranch
Shaker Residence
Price Residence
Harcourt Residence

The following clients have gone GREEN! And the list of members is growing! They have made the choice to incorporate sustainable building products and systems into their daily living environments. If you would like to learn how you can join them, by including green building products in your next residential or commercial project, please contact the Phillips Architecture & Planning offices at 541-382-8415 or visit www.phillipsarchitecture.com



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"Architectural grace that touches the soul..."

PHILLIPS ARCHITECTURE & PLANNING, INC. OPENING ITS DOORS IN BOISE, IDAHO

Phillips Architecture & Planning, Inc. has expanded into the "Gem State" of Idaho. To better serve our Idaho clients, we have opened a satellite office in Boise. We look forward to the opportunity to do work in the region and to provide optimum architectural and design services. To schedule an appoint with a member of our Design Team in Boise, ID, please call our 800# - **866-382-8415** or e-mail us at **info@phillipsarchitecture.com**