



## Application Form

### 2007 System Showcase

Radiant Panel Association  
1399 S. Garfield Ave., Loveland, CO 80537

Phone: (970) 613-0100  
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Response ID Z2705

Date Posted 5/9/07

#### Step 1 CATEGORY

6-15 Radiant Zones, new residential

#### Step 2 SUBMITTED BY

#### Step 3 PROJECT INFORMATION

PROJECT NAME: Wenner/Eisner Residence LOCATION: Southfield, MA  
YEAR COMPLETED: 2006 SQ FT LIVING AREA: 4,822

STRUCTURE AGE: New SPACE HEATED/COOLED BY RADIANT: \_\_\_\_\_ sq ft  
LEVELS/STORIES: 3

STRUCTURE CONSTRUCTION: wood frame

STRUCTURE USE: residence

PROJECT TYPE: \_\_\_\_\_

Heating    Cooling    Snow Melting    Other Type

RADIANT PANEL LOCATION: \_\_\_\_\_  
 Floor    wall    Ceiling    Other Location \_\_\_\_\_

Radiant Zones: # 9

ADDITIONAL FUNCTIONS:

Fan Coil    Domestic HW    Hot Tub    Pool  
 Convector    Other Functions

UTILITY: \_\_\_\_\_

Electric    Natural gas    Propane    Oil  
 Solar    Other Utility

HEAT SOURCE: \_\_\_\_\_

Resistance    Boiler    Heat Pump    Water Heater  
 Furnace    Other Heat Source

**Step 4 PANEL DESCRIPTION**

**Floor Panels**

TUBE OR ELEMENT:

- Cable    Film    PEX tube    PB tube    Rubber    PE/Metal  
 PE    Copper   **Other Tube/Element** \_\_\_\_\_

PANEL CONSTRUCTION:

- Concrete slab on grade    Concrete slab below grade    Sand below concrete slab  
 Gypsum on concrete    Gypsum on wood subfloor    Concrete/wood subfloor  
 Wood sleepers    Under wood subfloor    Suspended in joist bay  
 Aluminum plates    Reflective barrier    Premanufactured panels

**Other Panel Construction** \_\_\_\_\_

PANEL COVERING:

- Carpet glued    Carpet & pad    Hardwood    Softwood  
 Ceramic Tile    Stone    Brick    Bare

**Other Panel Covering** decorative finished concrete

OTHER PANEL DETAILS: \_\_\_\_\_

**Tube Size:** 1/2 inch   **Cable Size:** \_\_\_\_\_ watts/ft

**Spacing:** 6 to 8 in o/c (range)   **Other Panel Details:** \_\_\_\_\_

**Wall Panels**

- Cast iron    Welded steel    Extruded aluminum  
 Embedded tube/cable    Premanufactured electric

**Other Wall** \_\_\_\_\_

**Ceiling Panels**

- Embedded tube/cable    Premanufactured electric    Premanufactured hydronic

**Snow Melt Panels**

SNOW MELT CONSTRUCTION:

- Embedded tube    Embedded cable  
 Asphalt    Concrete    Pavers

SNOW AND ICE MELTING:

- Always clear and dry    Melt and run off    Melt within an hour of snowfall

**Step 5 CONTROLS**

## INDOOR SENSING:

9 Air sensing thermostats         Panel sensors    Other     

## OUTDOOR SENSING:

     Reset heat source high limits    2 Secondary loop temp controls

     \_\_\_\_\_

## PANEL TEMPERATURE CONTROL:

<u>1</u> 3-way mixing valves	<u>    </u> 4-way mixing valves	<u>    </u> Injection valves
<u>1</u> Injection Pumps	<u>    </u> Heat exchangers	<u>    </u> On-off valves
<u>    </u> On-off pumps	<u>    </u> On-off heat source	<u>    </u>

\_\_\_\_\_

## ROOM CONTROL:

<u>    </u> Zone valves	<u>9</u> Manifold telestats	<u>2</u> Pumping zones
<u>    </u> Thermostatic valves	<u>    </u> Relays (electric system)	<u>    </u>

\_\_\_\_\_

**Step 6 ADDITIONAL DESCRIPTION**

This unique residence offered the opportunity to showcase many of today's cutting edge HVAC applications. The main residence features a wall hung modulating Weil McLain Ultra gas boiler with 6 zones of radiant heating. The 1st floor features a thin slab over the conventional framing, finished with a colored wax finish. The 2nd floor features the master bedroom (carpet) and a tiled master bath and dressing room. These areas are served by a staple up system using extruded aluminum heat transfer plates. A Tekmar TN4 control system operates all functions of the design and drives the injection mixing floor system control. A 5 zone Trane air system serves the home's 2nd stage of heating, cooling, and air quality control functions. The boiler also provides the home's domestic hot water. The lower studio also features an Ultra gas boiler with 3 zones of slab on grade radiant and 1 zone of wall hung panel radiators (Gil's art studio). The guest house sees limited occupancy and uses a 3 zone gas furnace and Rinnai point of use gas water heater for potable use. The residence sees extreme temperature changes as it has a severe west exposure (wind and solar) and sits atop a mountain in the Berkshires of Western Mass. The radiant control system needed to be as advanced as possible, to finely tune the delivery water temperatures to avoid the flywheel effect these type of structures can see (also a very tight construction envelope using Icynene foam spray). The clients enjoyed a warm cozy winter, despite the bout of brutally cold weather through January and February.

### Step 7 DESCRIPTIVE PROJECT PHOTO



### Step 8 SUPPORTING PHOTOGRAPHS

22705

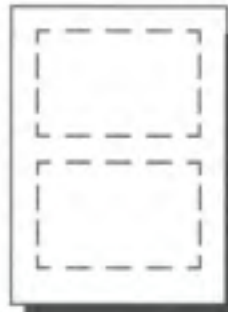
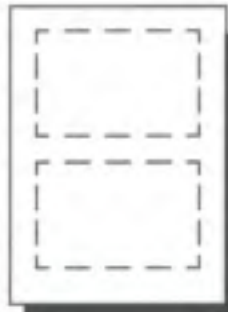
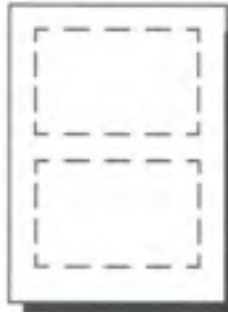
Attach photos to standard letter size paper (8 1/2 x 11") as shown below. You may include a maximum of three sheets of paper (six photos) for this section.

#### Required photos:

- tube or cable rough in
- finished installation of radiant heated area

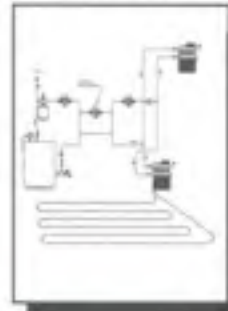
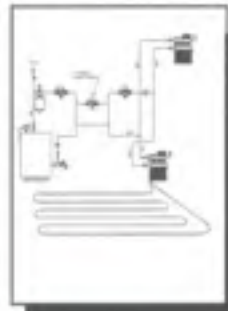
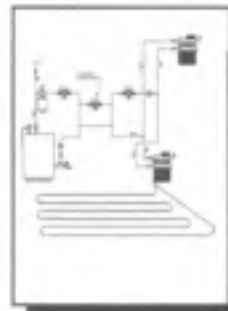
#### Suggested photos:

- building exterior
- panel installation
- mechanical room
- controls
- unique features



### Step 9 SCHEMATICS or DRAWINGS (maximum 3 - 8 1/2 X 11)

Attach up to three sheets of letter size paper (8 1/2 x 11") containing drawings or schematics depicting the mechanical/electrical details of the system. These may be hand sketches, professional drawings or computer generated.



Injection  
system +  
Tone air  
handler



West view  
of Catskill  
mountains



22705



guest  
house

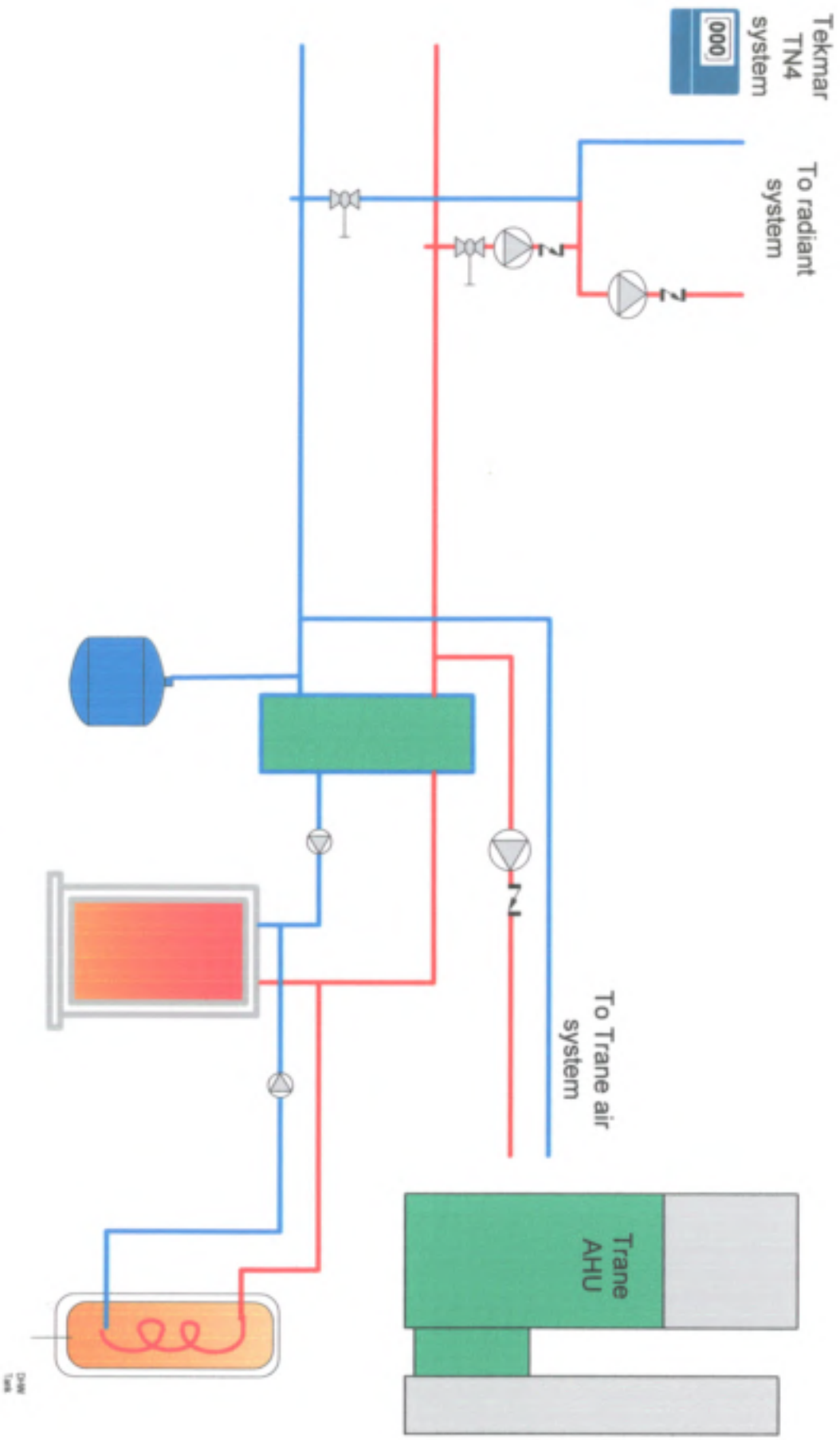
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Main  
House



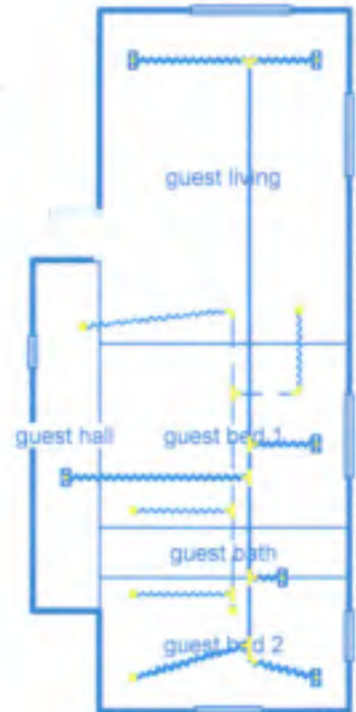
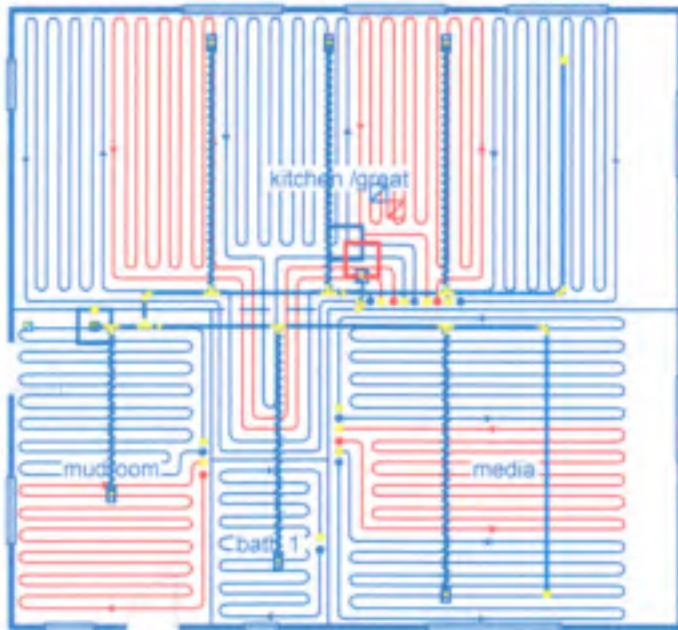
Pcy floor wat before thin slab pour 22705



Wenner / Eisner residence main house  
 hydronic design

2/27/05

1st floor



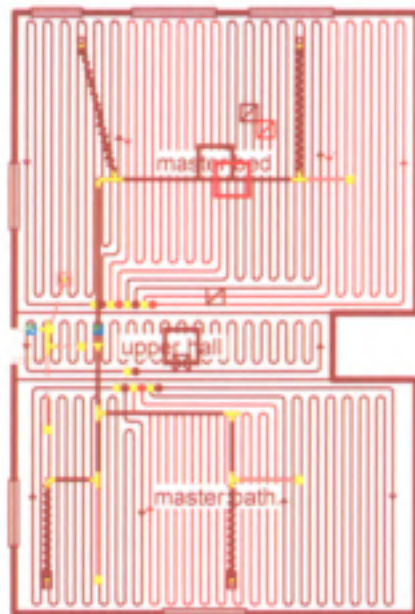
Job #:  
Performed by . for:  
Wenner / Eisner  
*22705*  
Southfield, MA

**Orchard Valley Heating and Cooling**

29 Rattle Hill Rd  
Southampton, ma 01073  
Phone: 413-527-5812 Fax: 413-527-5922  
www.orchardvalleyhc.com jmp@orchardvalleyhc.c...

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2nd floor



Job #:  
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*22705*  
Southfield, MA

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