

ThermoFin U

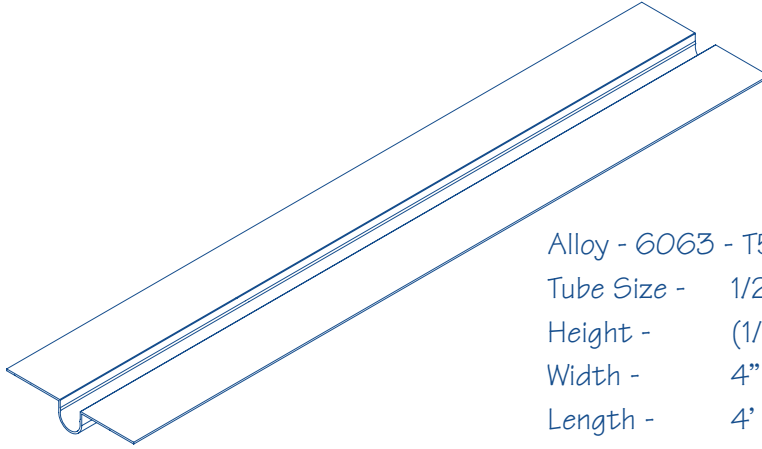
MADE IN USA

Canada Patent 2,158,302

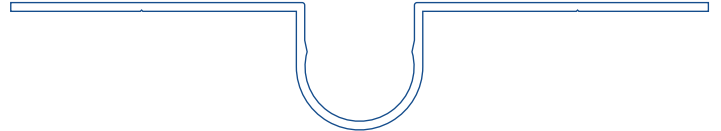
U.S. Patent 5,454,428

SPEC - DATA

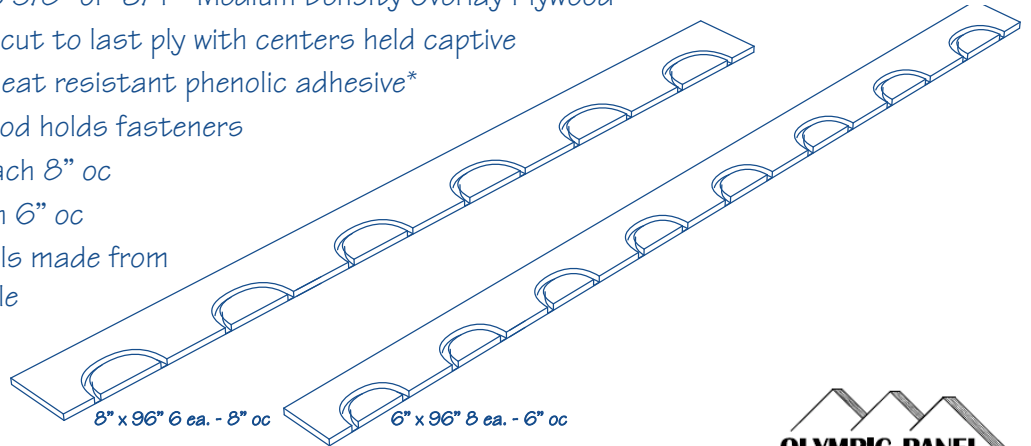
ThermoFin U is a versatile extruded aluminum heat transfer plate that can be used in several radiant panel heating applications including over subfloors and in radiant walls and ceilings. The tempered and rigid ThermoFin U grips PEX, Copper, or PAP tubing in a tight snap fit which increases heat transfer and eliminates expansion noises. ThermoFin U can be used with any popular PEX or copper tubing to create "dry" high performance radiant panels without concrete or gypsum.



Alloy - 6063 - T5 Gauge - .050"
Tube Size - 1/2" (5/8" od) and 3/8" (1/2" od)
Height - (1/2") 11/16" - (3/8") 5/8"
Width - 4"
Length - 4' and 8'
Weight ea. 4' - 1.176 lbs - 8' - 2.352 lbs
20 pc. box 4' - 23.5 lbs - 7.75"w x 4"h x 52"
8' - 47.0 lbs - 7.75"w x 4"h x 100"



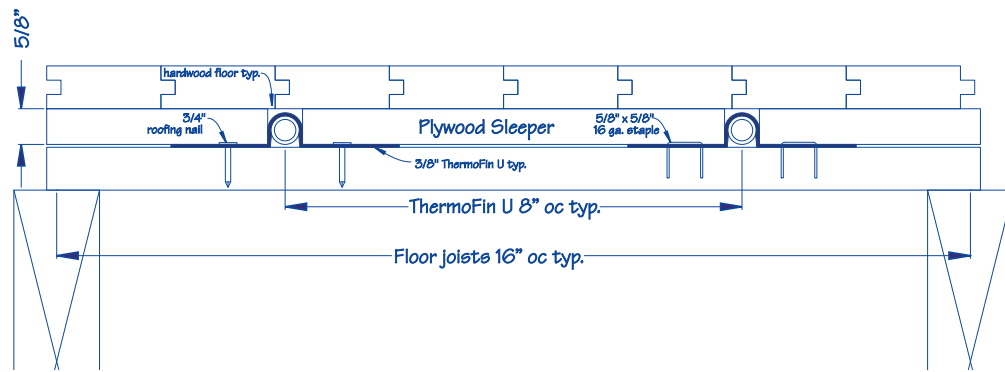
Full thickness 5/8" or 3/4" Medium Density Overlay Plywood
Return slots cut to last ply with centers held captive
Waterproof, heat resistant phenolic adhesive*
Quality Plywood holds fasteners
8" x 96" 6 each 8" oc
6" x 96" each 6" oc
Plywood panels made from
FSC certifiable
U.S. fir.



*meets California Air Resources Board requirements for ultra low formaldehyde emissions

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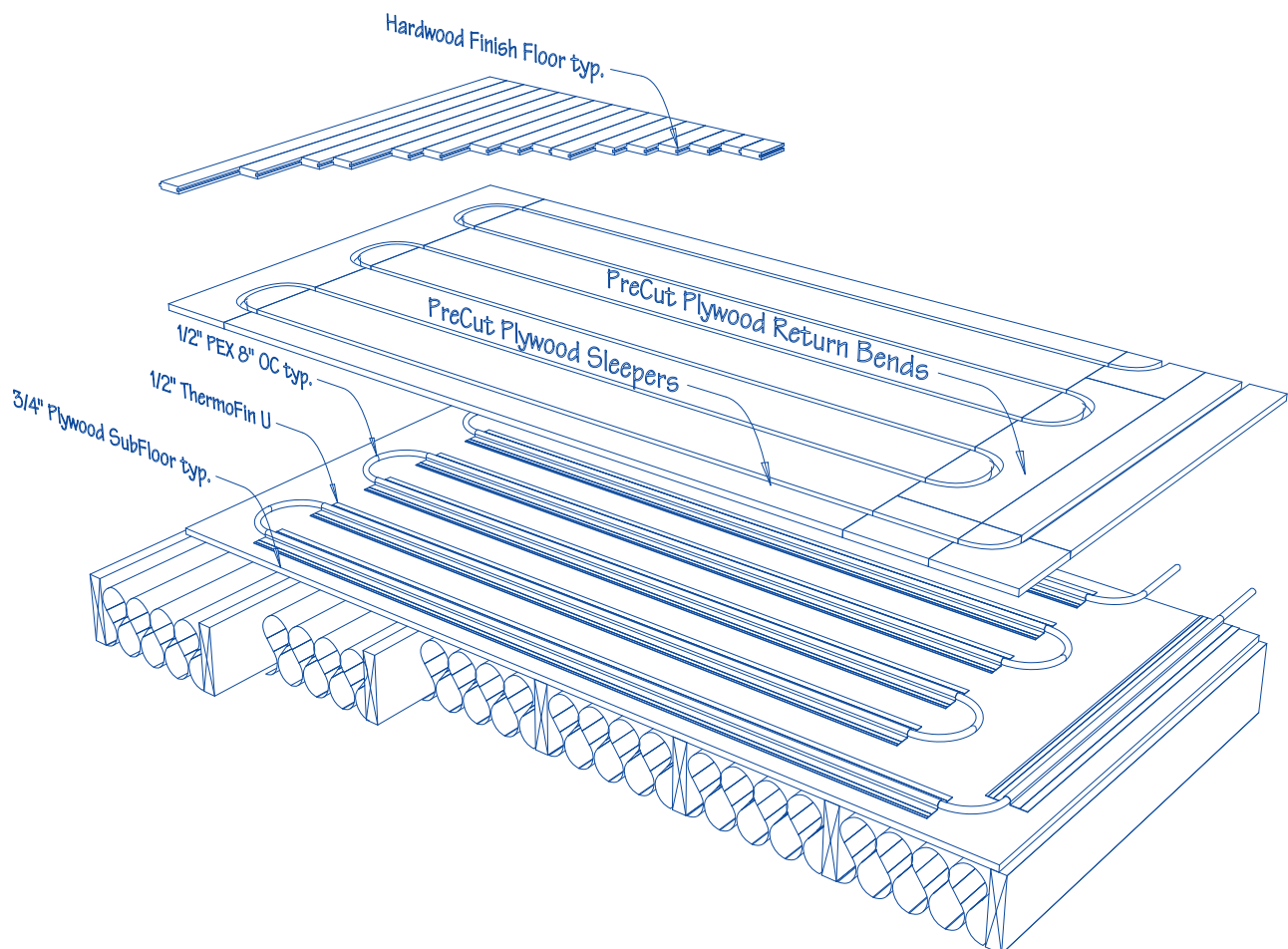
ThermoFin applied below the sleepers

ThermoFin U can be applied in two different ways above the sub-floor to produce a high performance radiant floor heating system.

In the preferred method, precut plywood return bends and sleepers fill the space between the ThermoFins and provides a plywood surface for finish flooring materials.

In this method, plywood return bends, precut for 8" or 6" tube spacing are placed first, and are followed by the installation of the tubing and ThermoFins. The long, rigid, 4' and 8' ThermoFin extrusions, help create straight and parallel tubing runs, which are then easy to fill in with precut dimensional plywood sleeper material.

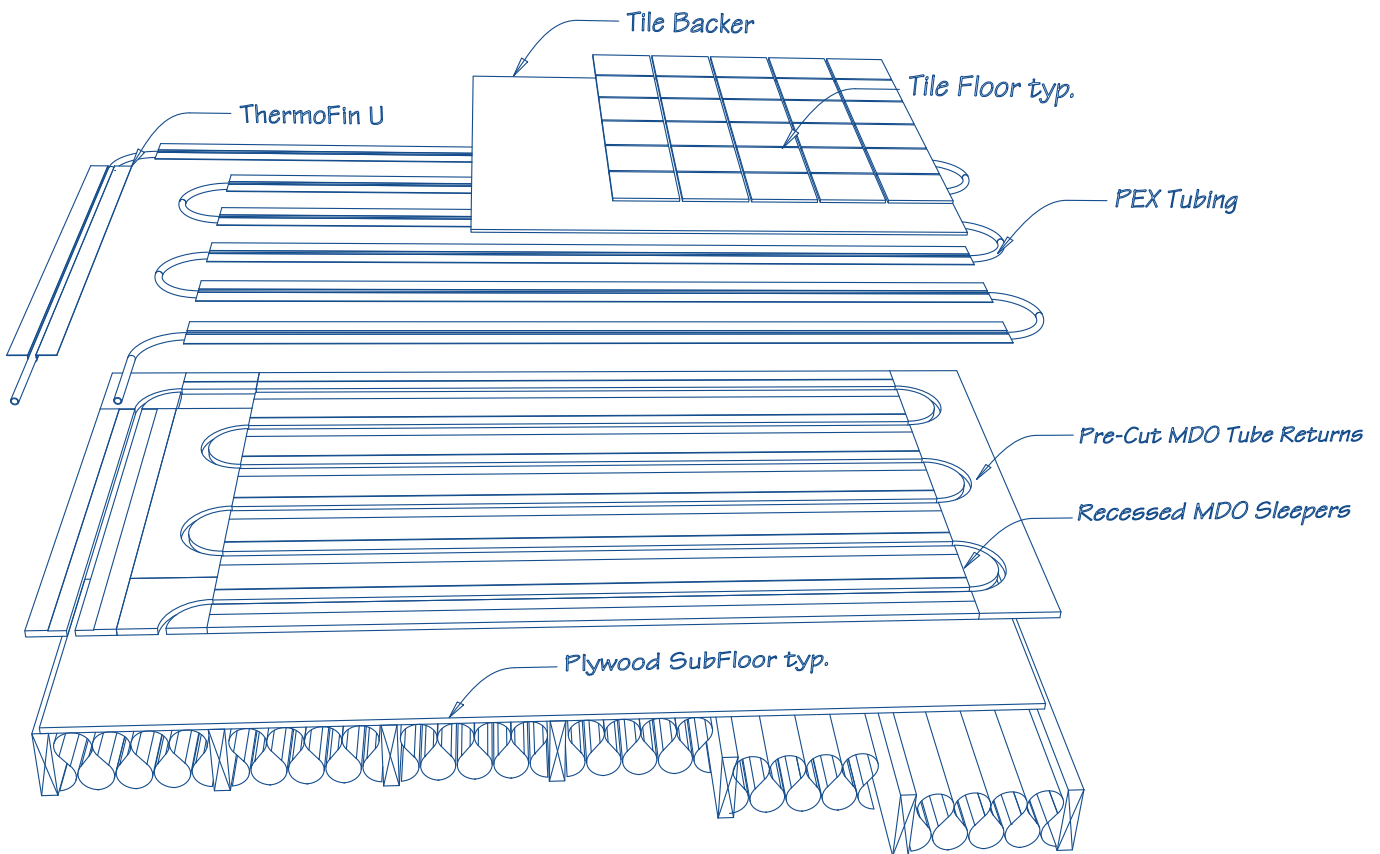
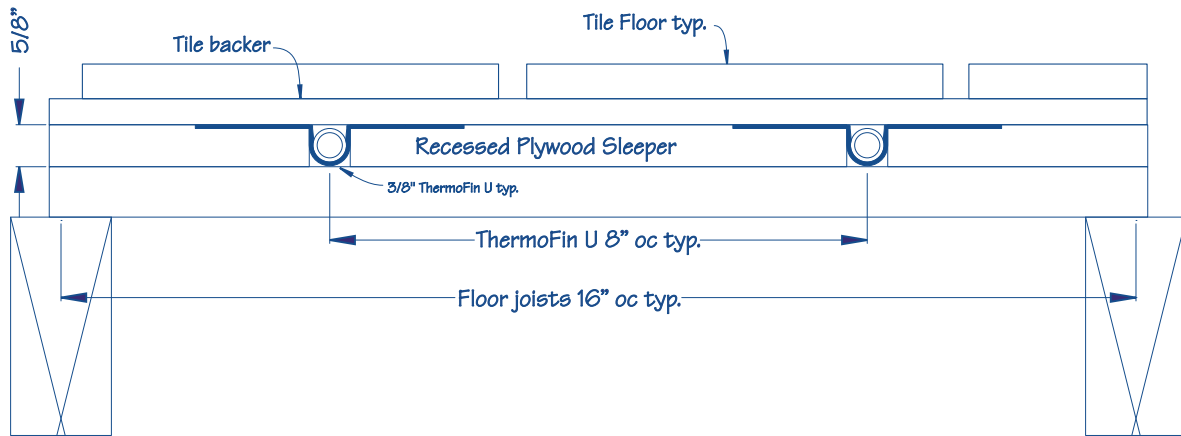
An advantage of this installation method, is that it presents a flat and dry, plywood surface for the installation of finish flooring. This is especially useful for the installation of hardwood finish floors.



ThermoFin applied above the sleepers

Higher heating performance may be obtained by placing the aluminum extrusions on top of the sleepers, with the snap channel facing up. Because this method moves the heat conducting ThermoFins directly under the finish floor, this installation method produces very high heating performance with extremely low heating water temperatures.

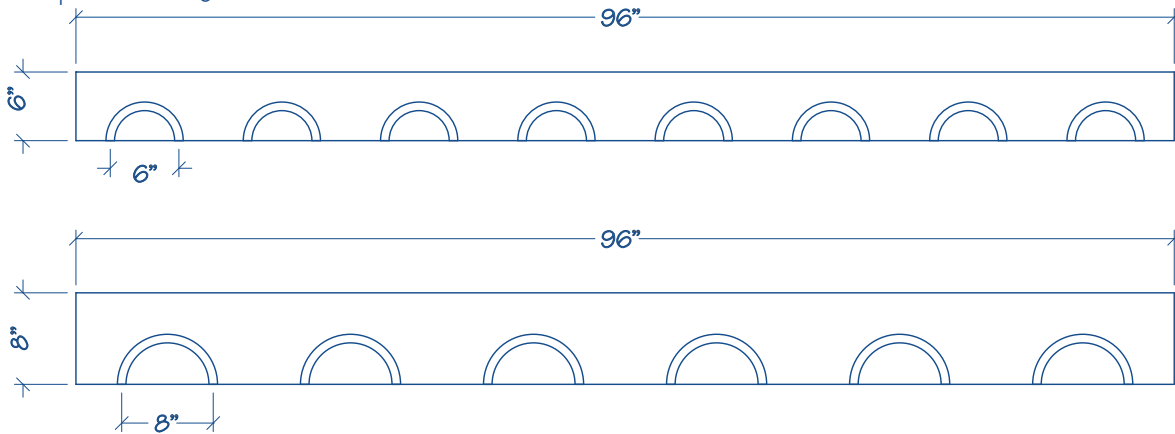
Hardwood floors especially benefit from the flat and dry, plywood nailing surface. Finish tile floors may be installed on top of an additional layer of tile backer such as cement board, Hardi-Backer, Georgia Pacific DensShield™ or DensGuard™ or over Schluter Ditra tile membrane.



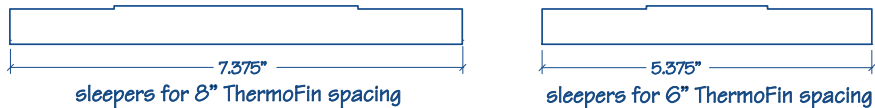
Tubing Returns and Sleepers

Precut return bends and sleepers provided by Radiant Engineering are cut from full dimension Medium Density Overlay, plywood that is manufactured with waterproof adhesives that are rated for heat exposure and will not swell with moisture. These familiar and durable materials provide a surface that is particularly friendly to a variety finish flooring materials.

Routed tubing returns are cut to the last ply with the center of the return held captive. Tubing returns are cut to place tubing on 8" and 6" centers.



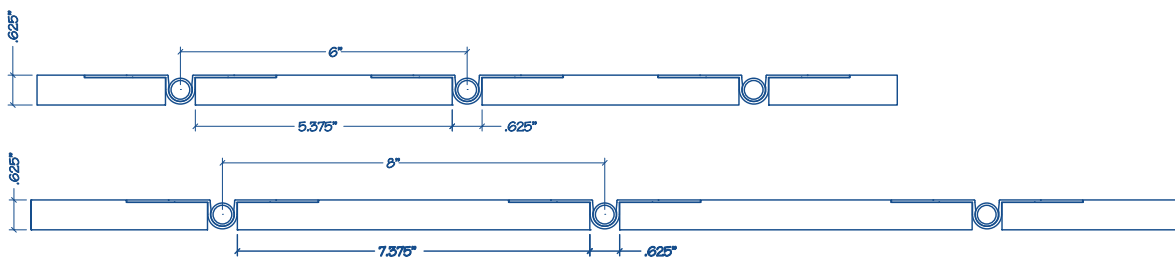
Recessed 5/8" Plywood Sleepers for 3/8" ThermoFin U



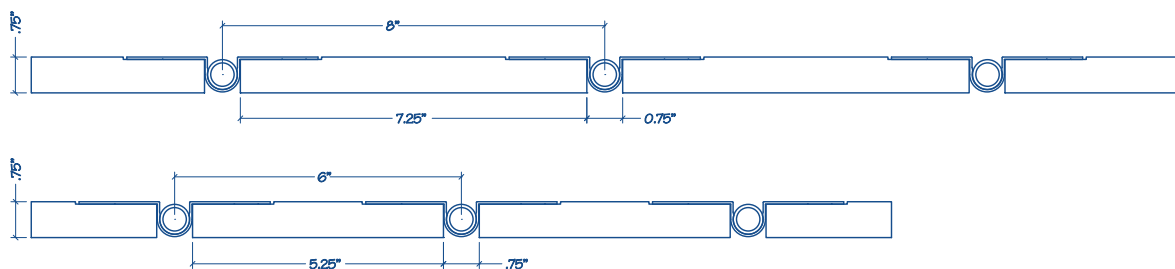
Recessed 3/4" Plywood Sleepers for 1/2" ThermoFin U



ThermoFin for 3/8" nom. tubing in 5/8" nom. plywood sleepers



ThermoFin for 1/2" nom. tubing in 3/4" nom. plywood sleepers



Versatile, tubing layouts

Standard 8" and 6" spacing of the radiant tubing allows complex tubing layouts including extensive zoning while accommodating building design and construction techniques and construction scheduling. Distribution piping and tubing manifolds can be roughed in, and the tubing layout is performed after the interior walls are framed.

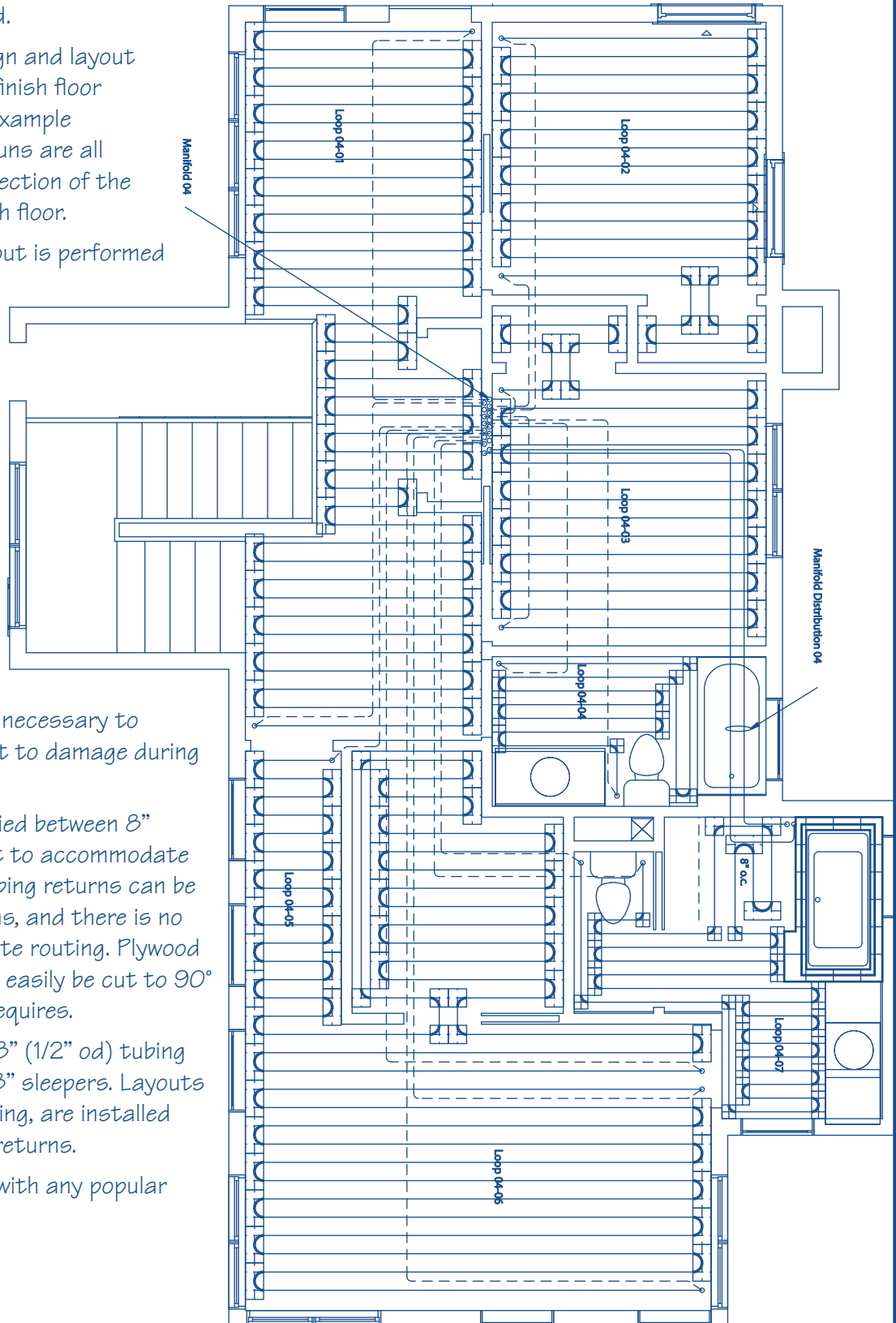
The radiant tubing design and layout can accommodate the finish floor installation, as in this example design where the tube runs are all perpendicular to the direction of the intended hardwood finish floor.

Because the tubing layout is performed on top of a standard sub-floor, it is not necessary to design the layout around the structural panel framing of the building as with large panel systems. It is not necessary to run radiant tubing under walls, cabinets or other dead spaces. Because the tubing layout is performed just before the finish floor, it is not necessary to expose the tubing layout to damage during construction.

Tube spacing can be varied between 8" and 6" within the layout to accommodate different room sizes. Tubing returns can be cut and placed in lengths, and there is no need for, "custom" on-site routing. Plywood 180° tubing returns can easily be cut to 90° and 45° as the layout requires.

Tubing layouts using 3/8" (1/2" od) tubing can be applied using 5/8" sleepers. Layouts using 1/2" (5/8" od) tubing, are installed with 3/4" sleepers and returns.

ThermoFin can be used with any popular type of PEX tubing.



Radiant Walls & Ceilings

ThermoFin U can also be used in novel wall and ceiling applications. Pre-cut plywood or urethane foam tubing returns are placed to span wall or ceiling framing. It is recommended that sheet insulation be applied to thermally insulate the wall or ceiling framing from the heated wall surface, especially critical when applied to outside walls.

In this application, it is preferred to place the ThermoFin extrusions on top of the return bends and sleepers, with the snap channel facing out to receive the tubing. The wall may then be directly covered with sheetrock, tile backer, cement board, wainscoting, and other similar surfaces.

