## **Problems**

- The cost to heat for a winter in 1980 was more than \$3500
- The install of a newer more efficient boiler in 1980 stressed the pipes under the fireplace hearth, and the radiant floor could no longer be used. This was the only non-solar heat source.
- Two years sitting empty burst sections of pipes which were not level enough to drain when all possible water was let out.
- Glass in the front window wall was settling into rotten wood exposing huge gaps between glass and framing.
  More than one inch gaps existed above some of the larger sections of glass.

- Roof leaks of course
- The wing tips the most southeast and southwest roof overhangs were sagging and attracting extra facia rot.
- The facia was in horrible shape.
- The roof overhang made the interior very dark.
- Distribution of heat, electricity, phones, etc was outdated
- No air conditioning for some of the summer nasty super humid times
- Most of the windows could be opened and closed once a year with great effort.
- All plumbing to the inside reflecting pool was unusable

## Plan

- Rip out the radiant floor leaving only a small strip in front as footing support for the window wall
- Install a new insulated radiant floor with insulation under it
- Install new pool plumbing before the radiant floor is poured, of course.
- Remove the window wall and place a new infrastructure.
- Remove all windows and second story wood walls.
- Increase the composite beams width, to meet current day snow load standards
- Replace the existing central tower sky lights and add 5 more to brighten the insides upstairs
- Replace all the windows
- Replace the window wall
- Install a new fascia

- Re-roof it of course
- Renew and replace the upstairs walls
- Plumbing and wiring as needed
- Install a high efficiency furnace for quick warm-ups and to provide a fan system for the new central air
- Install wiring and air vents into a small cedar chaseway along the back of the second floor balcony enabling electrical controls for the downstairs box lights, central phone routing, upstairs electrical distribution, and air flow both into the downstairs and upstairs for heat and air. This chaseway was just a little larger than the old fin radiator system which my family had installed on the second floor to take the chill out of all of those rooms.