

Hotels and Nursing Homes

Critical considerations in the design of hotels and nursing homes are:

- Maximize occupancy rates, referrals, lengths of stay and repeat visits.
- Keep guests comfortable, draft free, cool in summer, warm in winter.
- Reduce sound transmission between rooms and bathrooms and limit exterior noise transmission from planes, highways, trucks and street noises.
- Control moisture and mold inside wall cavities and inside room interiors.
- Provide high quality indoor air to accommodate guests with allergies, etc.
- Minimize energy cost.
- Minimize maintenance cost.
- Minimize construction time.
- Minimize mechanical and electrical equipment costs.

The Icynene Insulation System® offers the opportunity to accomplish all these goals with its one step Thermal Envelope/Acoustical System. This foam material allows a general contractor to create a virtually airtight building envelope in one step.

Combining air sealing with Icynene® low-density foam insulation and properly designed mechanical ventilation and heating/cooling system provides a building that is healthier, quieter, more comfortable and energy efficient. The benefits of Icynene® applied to the entire building envelope are:

Improved guest comfort by:

- Elimination of drafts.
- Elimination of convection inside walls cavities and reduction in air exchange between outdoors/attic,

and the interior. This results in interior wall temperatures close to ambient room temperature and reduced radiant cold/heat experienced by guest.

- Better dehumidification in summers due to more frequent operation of smaller a/c units.
- Less fluctuation in interior temperatures in any season.

Natural air leakage through walls and the attic is reduced to 0.15 ACH or less resulting in:

- Elimination of moisture and mold formation in interior walls.
- Reducing the heating/cooling load on the building by 40%.
- Reducing outdoor sound transmission by having a virtually air tight wall assembly.
- Lowering all room circuits to 110-120 volts.
- Reducing room distribution panels.
- Dropping interior power distribution circuit sizing.
- Downsizing power supply lines from the utility grid.
- Reducing the service entrance transformer sizing.
- Reducing electrical energy consumption.
- Reducing peak electricity demand.

Direct from room mechanical exhaust and conditioned makeup air supplied to corridors result in:

- Elimination of individual room exhaust fans and electrical circuitry.
- Better air quality and reduced temperature differentials between rooms and corridors, resulting in a reduction in mold formation inside rooms.

Improved acoustics by incorporating Icynene® into interior partition walls:

- Potentially reduced thickness of walls (from 2x6 to 2x4 construction) with equal or superior performance
 - Eliminates need for extra thick acoustical materials and sealants to interior finish.
 - Reduced sound from interior fans and smaller A/C units.
 - Reduced sound transmission from bathtubs and plumbing due to Icynene's® custom fit, adhesion, and sound absorbing properties.
- Elimination of moisture related structural problems, increasing building life expectancy.
 - Decreased utility costs for the life of the building.

Reduced construction time and cost:

- By elimination, or reduction of many steps and materials, including interior vapor barriers, exterior building wrap, soundboard, preformed mechanical pipe insulation, glass fiber batts, individual room fans and electrical work.
- By reduction of site traffic, by an estimated 30 truckloads of materials in a 100 unit motel and the storage and handling of these goods through the corridors the productivity of other trades can be enhanced. Due to the high speed of The Icynene Insulation System® installation because it does not involve handling bulky materials and fasteners.
- Incorporating the benefits of The Icynene Insulation System® into a building results in a superior structure with a net capital cost saving to the owner.

Reduced maintenance cost:

- Elimination of moisture and mold spores inside wall cavities eliminates the growth of mold behind wall finishes and prolongs the life of vinyl interior wall finishes
- Reduction of mold growth in room interiors reduces routine cleaning and prolongs the life of carpeting & bedding and soft furnishings.

