

solar orientation

This is where the dome really shines!
(couldn't resist the pun)

With the ability to place windows in any triangle, the dome can be opened up to wherever the sun is, high or low.

Virtually any site can be opened up to the south by the dome windows.

The dome at right has a large pentagon group of windows facing southeast. The solar greenhouse faces due south for maximum solar gain. Below the greenhouse is a rock storage mass for excess heat. The forced air furnace then draws the air from this space.

Works great - even its northern Wisconsin location.

The dome at right has six very high triangle windows facing south and southwest. The window height was due to the sun angle and available tree openings. In the winter, the sun hits a large brick fireplace mass from 11AM to 3PM. The sliding glass doors and south windows on the west facing extension also collect heat.

This northern Minnesota dome is always bright and cheerful inside, uplifting the inhabitants even on dull winter days.

Form follows function in most domes. If you want sun, you put in a window. If you want a view, you put in a window.

Passive solar simply means you don't have pumps, pipes, motors or fans to get the solar energy into your dome. Much cheaper that way.

It can be as simple as the dome at right with almost all of its windows facing southeast, south and southwest.

We try to use passive solar principles in planning the dome with you. There is just so much to be gained. A Natural Spaces dome, being superinsulated, can retain the sun's heat longer.

As fuel costs continue to rise, the free energy from the sun will look better and better.



site analysis

contour map

Knowing the slope of your site is critical in the proper development of your plan. If there is any slope at all, a contour map should be made.

This map would also spot the major trees to help plan for the best open solar gain area in winter and for summer shade.

The lines at right are contours for an actual site. A very steep site but one with a lot of drama. Exactly how close to or how far over the edge of the hill a dome should be placed, a map would determine.

When the actual digging for the footings begin, someone has to tell the excavator how far down to dig.

Too far down and you have drainage problems, a walk-out that walks out into a hill, or driveways too steep to drive.

Not far enough down and you have frost problems, entries too high or not enough backfill.

Guessing isn't good enough. You should either rent a transit and try doing it yourself or hire it out.

Natural Spaces can provide this service with experienced people that can draw up a contour map quickly and accurately.

site selection

The actual building site should take into account many physical and visual characteristics:

- Sun, wind, rain, snow
 - Trees, shade, windbreaks
 - Water runoff, drainage
 - Driveways, walks, garages
 - Landscaping
 - Views, both good and bad
 - Privacy, noise-and many more
- Natural Spaces can help you in situating your dome on your present or prospective site, using our years of experience.

