

## **A.6 ADVANTAGES OF BUILDING WITH POLYSTEEL FORMS**

There are numerous advantages and benefits that PolySteel provides for architects, engineers, installation professionals, and the ultimate users of PolySteel Forms – those who work and live in PolySteel buildings and homes. These are just a few that are repeatedly mentioned by those who have chosen to use this superior construction technology:

### **A.6.1 DESIGN FLEXIBILITY**

PolySteel can be formed into any shape imaginable. The foam can be easily cut to achieve any angle, curve, arch, or other aesthetic design conceived, while providing the structural integrity to ensure that the end product will remain as a lasting monument to the author of its creation.

### **A.6.2 STRUCTURAL INTEGRITY AND SECURITY**

- ✓ PolySteel Forms are filled with reinforced concrete that will not be eaten by wood-eating termites, ants, etc., and PolySteel is the only manufactured ICF available with Perform Guard<sup>®\*</sup>, the only code-recognized method for protecting foam insulation below grade in the heavily infested termite areas of the U.S.
- ✓ The stability of a reinforced concrete-filled PolySteel wall makes PolySteel a superb building system for earthquake zones, tornado and hurricane areas, and has been recognized by the Federal Emergency Management Agency (FEMA) as a recommended material to use for the design of tornado-resistant safe rooms.
- ✓ PolySteel walls are bullet resistant, blast resistant, and can be designed to withstand flying debris blown about by a 300 mph wind.
- ✓ The expanded polystyrene, steel, and concrete in PolySteel walls provides no nutrient value to plants, animals, or microorganisms, including mold, and the solid concrete walls eliminate the hollow cavities that offer moisture and habitat for these organisms in framed walls.

### **A.6.3 CONSTRUCTION**

- ✓ PolySteel is lightweight and easy to handle on the job. One 12-pound form creates the same amount of wall area as over 300 pounds of concrete block.
- ✓ Fewer man-hours are required to erect a PolySteel wall than for conventional concrete, wood-frame, or concrete block walls.
- ✓ PolySteel Forms eliminate the need for, and cost of, buying, stripping, cleaning, transporting, and storing reusable forms.
- ✓ Concrete can be poured into our insulated PolySteel Forms at temperatures as low as zero degrees Fahrenheit (-18 C) without adding special chemicals.

\* PerformGuard is a registered trademark of AFM Corp. and is produced under license from AFM Corp.

## A.6 ADVANTAGES OF BUILDING WITH POLYSTEEL FORMS

### A.6.3 CONSTRUCTION (continued)

- ✓ The ability to place concrete in colder temperatures, combined with the temperate and comfortable building environment created within PolySteel's massive walls (even without windows), extends the building season for construction by several months.
- ✓ PolySteel eliminates the need for additional insulation and the labor cost of installing it.
- ✓ PolySteel provides the fastest method of constructing a fully-insulated concrete wall, reducing total construction time.
- ✓ By installing the framing, furring, insulation, and vapor barrier in one step, PolySteel can reduce the number of subcontractors on a job and speed total construction time.
- ✓ PolySteel can be pre-panelized in complete wall sections to dramatically minimize on-site construction time.
- ✓ PolySteel Forms greatly exceed standard building requirements.

### A.6.4 HEATING & COOLING

- ✓ PolySteel walls are more energy efficient than an R-40 insulated 2x12 wood-frame wall.
- ✓ PolySteel PS•4000 walls provide a thermal mass of 72 lbs. per square foot with the 6-inch forms, and 96 pounds per square foot with the 8-inch forms. Encapsulating this mass in high-density EPS insulation contributes significantly to the thermal performance of the entire structure.
- ✓ The tongue-and-groove design of PolySteel Forms minimizes heat loss through insulation joints.
- ✓ PolySteel walls minimize outside air infiltration, leaks, and drafts.
- ✓ PolySteel Forms create a super-insulated concrete wall which reduces heating and cooling costs by 30 to 80 percent.

### A.6.5 COMFORT

- ✓ PolySteel walls create a sound barrier that virtually eliminates outside noises.
- ✓ PolySteel structures provide much warmer floors and a more uniform temperature throughout the interior of your home.
- ✓ PolySteel Forms minimize mildew and the damp smells of normal basements.
- ✓ PolySteel walls minimize dust and pollen infiltration, keeping furniture cleaner longer, and the air you breathe healthier.

## A.6 ADVANTAGES OF BUILDING WITH POLYSTEEL FORMS

### A.6.6 ADDITIONAL ADVANTAGES

- ✓ Fire insurance rates on PolySteel structures are typically lower than those for conventional, wood-frame, buildings.
- ✓ PolySteel homes and other PolySteel buildings will typically appraise higher than those constructed with conventional wood framing.
- ✓ PolySteel Homes qualify for Energy Efficient Home Mortgages, including the PolySteel Energy Efficient Mortgage, which can mean more mortgage money.
- ✓ PolySteel Forms result in a cleaner, safer, and more sustainable environment.

*PolySteel Forms enable designers, builders, and other construction professionals to provide their customers with the most attractive, structurally secure, cost effective, environmentally responsible, and comfortable building that money can buy.*



RESIDENTIAL



COMMERCIAL

*"American PolySteel has developed the standard by which all other forms of conventional building techniques and materials should be measured. If quality, durability, economy, and architectural appearance are the criteria, there is simply nothing better... Moreover, its benefits are equally applicable to affordable housing, custom home, commercial structures or wherever wood framing, concrete block, or concrete tilt-up is being considered."*

Steve Lathrup  
Ellensburg, Washington