

# Construction Cost Estimate Blank Form

This article contains Construction Cost Estimate Blank Form



Fiber concrete being applied in the seams between the prefabricated panels of a 22' dome.

The following blank form is provided for you to fill out as you determine your material and labor costs for your dome kit assembly and finishing. Because labor costs and materials cost vary in the USA, Ai cannot estimate your costs. However the web site link below can be used to estimate finishing costs for your area.

**[Free Web Site To Calculate Finishing Costs For Your Area](#)**

To view information on a free web site where you can look up finishing costs for a conventional home in your state and

area, click on [Calculating Square Footage](#) Costs. This article also includes a **Construction Cost Estimate Report from building-cost** for a 1200 sq.ft. home in Melbourne, Florida.

If you build an American Ingenuity dome using one of our stock plans, click on [Plans & Kit Sale Prices](#) to view regular and sale pricing on the building plans and the kit w' building options pricing or each stock plan.

The American Ingenuity dome kits can be assembled by [owner builders](#). If you choose to use the Kit Assembly Consultant to supervise the assembly of your dome kit, click on [Kit Consultant/Specialist](#) for approximately labor costs to assemble the dome shell kit. The rest of the categories are generally the same costs whether it is a dome or a conventional house. **To learn about Kit Assembly & see pictures, view [Assembly](#) and [Construction Overview](#).**

The finished costs on American Ingenuity concrete domes depends so much on where you live and what labor costs are for your area. You can ask at your local hardware store or ask a local contractor what the finished price per square foot is running for a conventional house in the neighborhood you plan to build in. That is what it will cost to finish the domes (if you do no labor yourselves), because everything in the interior is the same whether it is a conventional box house or a round house: foundation, plumbing, electrical, second floor joists, framing, lighting fixtures, bath room fixtures, kitchen appliances, flooring, kitchen cabinets, windows and doors, etc. To learn more click on [Finished Cost](#).

To View three charts listing pricing for items purchased from Ai for three dome kits Ai recently shipped, click on [Pricing Charts](#)

**Is the American Ingenuity (Ai) steel reinforced concrete geodesic dome kit less expensive than the materials cost for the exterior walls and roof of a conventional house or wood dome or log cabin or monolithic concrete dome?** Yes. American

Ingenuity's **dome shell kit price** (not the finished home cost) is about one third to one half less in cost than what the materials cost for the exterior walls and roof of a wood dome, gunited concrete dome or conventional house (exterior walls, roof trusses, plywood, tar paper, shingles, 3 1/2" thick insulation, siding, soffits, gutters, drywall for exterior walls & the ceiling, etc.).

**Ai thinks the only big bargain you will receive is its dome building kit**, which costs about one third to one half less than other building kits or materials to build the exterior walls and roof of a conventional house, wooden dome or sprayed concrete dome. And with the American Ingenuity Dome you end up with more...super-energy efficiency, super-strength, noncombustible concrete exterior and low exterior maintenance home.

To view floor plan layouts for each of American Ingenuity's ten dome kit sizes, click on [Stock Plans](#). On each plan is a to-scale ruler. When you print out the plan, cut out the ruler and use it to measure length and width of rooms and compare those room dimensions to the rooms you currently live in. You know whether you want your kitchen, living room or bedroom to be larger or smaller than your current house or apartment. This will help you figure out what size dome will fit your needs. The scale is 1/10" equals one foot.

No question is too small, please call our office at 321-639-8777. Monday – Friday 9-5 eastern time.

To view info about financing, please click on [Financing Booklet](#).

**Domes are measured by feet in diameter.** Refer to [Specifications](#) to see possible square footages by floor.

- A 15' and 18' Tiny Kits are one bedroom one bath size.
- A 22' can be a one car garage or a one bedroom/one bath home.
- A 27' or 30' can be a two car garage or a one bedroom/one bath home.

- A 34' is a two bedroom, two bath. (The 34' was a little too small so Ai designed a 36' dome.
- A 36' is a two bedroom, two bath.
- A 40' is a three bedroom, two bath.
- A 45' is a four bedroom, three bath.
- A 48' can be a four or five bedroom home with three to four baths.

### Calculating Finished Cost

Please compare apples to apples when trying to calculate finished cost of an American Ingenuity dome. A conventional house would need walls greater than 2x10 with exterior reinforced with rebar and super thick concrete and still not come close to the advantages of an American Ingenuity dome. The Ai dome should cost about the same price per square foot to build as a conventional house but you receive more...greater energy efficiency, greater strength, noncombustible concrete exterior. To view Ai dome advantages, click on [Advantage Summary](#).

When you factor in the storm resistance and energy efficiency, a traditional home would need to have 11" of insulation requiring over 10" thick insulated walls (this is with our standard 7" EPS R-28 value insulation) as well as additional roof strapping, rebar and concrete against storms, and still not be equal to one our structure's insulation and strength. So please compare apples to apples! Our kit comes with all the interior shell 1/2" gypsum drywall installed, all the R28 insulation installed and 80% of the finished roof...and no wood to interrupt the insulation to rot, burn or be eaten by termites. No shingles to blow off in high winds. Exterior concrete is primed and painted.

### **Comparing Apples to Apples When Researching Types of Housing**

Material cost is only half of the equation, labor costs often eat up a large chunk of a construction budget. American

Ingenuity's panelized system has proven to save our clients labor time, as well as a reduction in material waste and material costs. That is why when comparing geodesic companies, conventional construction, etc. it is important to compare apples to apples, not just kit cost. The process of stacking the American Ingenuity prefab panels, overlapping/locking the steel mesh of adjacent panels and filling the seams with special fiber concrete, **produces the structural components of the home, the finished concrete surface, installs all the insulation and all the dome shell 1/2" drywall.** No need for material and labor costs to install exterior framing, plywood, tar paper, shingles or interior shell insulation and shell drywall.

Ai is committed to providing you with the best design, energy efficiency, and durability with our panelized system for geodesic concrete homes for an affordable price.

**Q: What are the American Ingenuity triangular and rectangular shaped panels made from?**

A: Center core of 7" rigid, nontoxic Expanded Polystyrene R-28 Insulation (not Styrofoam), exterior is three quarter inch ( $\frac{3}{4}$ " ) fiber concrete reinforced with galvanized steel mesh with interior of 1/2" Georgia-Pacific DensArmor Plus High-Performance gypsum drywall (which is moisture resistant, mold resistant gypsum and noncombustible). The steel mesh extends out all sides of the prefab panels. When two panels are set side by side, the steel mesh overlaps the mesh of the adjacent panel and is locked with "C" rings. Special fiber concrete is mixed on site and hand troweled in the seam areas in two applications – bonding agent is applied between the two layers. The seam areas average 2" thick concrete.

Ai wants the concrete that is mixed on site to have the same properties as the concrete we manufacture and apply to your prefab panels. As a result we ship the same fibers, liquid admixtures and bonding agent with your kit and supply a

concrete mix recipe in the building plans and in the Assembly Manual.

When you compare other companies dome kits, please consider the following items:

**Q: Does the companies kit have a finished exterior, or do you need to finish with a vapor barrier and either shingles, siding or stucco?**

A: Ai's dome's exterior is 3/4" fiber concrete reinforced with galvanized steel mesh. Only the seams (about 3" deep by 5" wide) between the panels & the entryways & dormers are concreted on site. You do not concrete over the entire shell. After kit assembly the concrete gets primed and painted.

**Q: Is the framing of the exterior walls wood or is the exterior of the kit wood, that eventually rots, or termites can eat, or can potentially burn?**

A: Ai's dome prefab panels contain no wood in them making the panels fire resistant. Our domes have survived forest fires. There is no wood in the dome exterior to rot or be eaten by termites. There is no roof or shingles to burn and no roofing to blow off in high winds.

**Q:What maintenance is needed for the dome exterior?**

A: The entire exterior of the Ai dome shell is covered with a continuous layer of concrete so there is nothing to rot, rust, shrink, warp, or be eaten by termites. Without shingles, gutters, or exterior trim to maintain. It only requires an occasional pressuring washing and painting.

**Q: Does the kit contain insulation? What type, and what is the overall R-Value for energy efficiency?**

A: Ai's kit's riser and triangle panels come with 7" thick Expanded Polystyrene (EPS) insulation already installed producing an overall R-Value of 28. An option is available for 9" insulation R-36 value. In addition, our exterior triangle and riser panels have no wood ribs interrupting the insulation

resulting in continuous insulation. (Other companies suggest the use of spray foam insulation which is expensive to install, often covers wiring and piping making repairs difficult).

**Q: Does the insulation recommended for the shell contain HBCD, TCPP, CFCs and formaldehyde?**

A: The EPS insulation that Ai contains none of the above items. It is not Styrofoam. The EPS that Ai utilizes has a flame retardant added to it, therefore the EPS is noncombustible and is protected by the 1/2" DensArmor drywall which is also non-combustible and provides the Code required 15 minute thermal barrier. EPS when exposed to flame does not produce toxic gases such as Cyanide.

**Q: How is the interior of the dome shell finished? Do you have to buy, cut, nail or glue drywall that you have purchased to the interior of the dome shell? Or do you need to spray foam insulation over the entire shell? (Very labor intensive and expensive)**

A: Ai's kits triangle and riser panels come with 1/2" thick DensArmor (by Georgia Pacific), fiberglass mat on both sides with gypsum that is moisture resistant and mold resistant. During kit assembly rain will not harm the drywall. The drywall is adhered to the EPS with wallboard adhesive. There is no cutting and adhering of the drywall needed for the shell interior. There is no need to spray foam insulation, saving you labor costs, and less product waste. When the kit shell is assembled tape the joints and finish like traditional wallboard. (To blend the seam areas to the drywall, apply joint compound in a skip trowel effect.)

**Q: Do their kits come with standard vertical riser panels before the triangle panels slope inward?**

A: Ai's kits come standard with 4' tall prefab riser panels. This allows for first floor vertical space (8' headroom on first floor) before the dome panels start to slope in giving you more useable headroom on the second floor. We also offer



an option to increase the riser panel height giving you up to 10' of headroom on the first floor (dependent upon dome diameter size).

**Q: Do they offer in house building plan design? Are the plans fully executable, and permit worthy? Do they use a knowledgeable licensed engineer, for design calculations and engineer seal if needed? Can they produce an Energy Report if needed? Is an Assembly Manual provided?**

A: Ai's cad designer works to create a home layout that is unique, whether using existing floor plans or one that is designed to your specifications. Our plans are in full detail (13- 17 sheets), fully executable, and permit worthy. We work with engineers who are knowledgeable about geodesic structures to do specialized load bearing designs and seal our plans (if needed). Ai can provide energy reports if required for permit. Our assembly manual covers in detail the construction process of the dome (the manual is available to view once a kit deposit and order is made.)

**Q: Finally, does the other companies back up their product against high winds Tornadoes and Hurricanes?**

A: American Ingenuity offers a limited warranty up to a 225 mile an hour hurricane winds, or an F4 tornado, see details on our website.

I hope that when finished comparing our concrete dome home kit against other housing types, you will see that our product is superior, and more cost effective. We look forward to speaking with you, and working with you to provide you a home kit that is safe, secure and energy efficient.

Dome Size		30'		34'		40'		45'		48'
Item	Material	Labor	Material	Labor	Material	Labor	Material	Labor	Material	Labor





\*\* Finishing seams with joint compound and tape and painting a textured paint (paint with sand or vermiculite mixed in it) onto the dome shell wallboard. Or apply joint compound in a skip trowel fashion over the drywall to blend seam areas to the drywall.

These categories do not include costs of land, engineering and permit fees, Florida impact fees, building plans, site preparation, utilities such as water, septic/sewer, electric, etc.