

APRIL 2019 NEWSLETTER

What is New!

Excellent meeting in Tampa organized by NRMCA where we shared ICF experience with engineering companies and major ICF builders in the area, we toured the Arturo Fuentes Cigars warehouse a full ICF shell construction where this Cigar Manufacturer storage its products with the temperature and humidity adequate saving 28% in energy expenses comparing with the next identical building, but conventional construction.

NRMCA and RS Means have done a study in Philadelphia PA comparing the costs of using non-combustible material with wood construction. In addition of the safety and everlasting advantages, NRMCA also compared costs impact between the two construction methods concluding that non-combustibles (concrete and masonry) buildings cost 13.7% less than combustible (wood) buildings. They use data of 314 projects of 1 to 7 story buildings constructed between 2013 & 2016.

A second, more recent, analysis was also done in a four stories apartment building with 100,000 sqf and 92 units determining that the concrete (non-combustible)



COME AT A PRICE FOR PHILADELPHIA COMMUNITIES.
 Two analyses show costs of using non-combustible building materials either on par or less than wood.

Using non-combustible materials has been proven to save lives. But too many communities have been relying on wood construction because they believe it saves money for multifamily buildings. Analyses from Dodge Data & Analytics (DDA) and RS Means highlight the affordability of non-combustible construction in Philadelphia is virtually the same as building with wood. The results mean local construction and developers thrive, while residents and businesses stay protected.

Analysis #1: HISTORICAL COSTS		Analysis #2: ESTIMATED COSTS	
Apartment built with non-combustible materials	Built with wood construction	Apartment built with non-combustible materials	Built with wood construction
COST DIFFERENCE OF ↓ 13.7%		COST DIFFERENCE OF ↓ 0.27%	
Comprehensive concrete costs: \$124.97/sf	Comprehensive wood costs: \$144.77/sf	Comprehensive concrete costs: \$18,553,499	Comprehensive wood costs: \$18,603,237

*With over half a million real projects tracked annually, DDA is the most comprehensive and economic model ensuring insight and forecasting confidence.

**RS Means is the world's leading provider of construction cost data software and services to help owners, architects, engineers, and contractors precisely estimate cost of new building construction.

We can afford to put the safety of Philadelphia residents first. Pass a citywide ordinance to build with non-combustible materials. Learn more by visiting BuildWithStrength.com.

BUILD WITH STRENGTH

building was 0.27% less expensive than the wood (combustible) structure. Currently, there are many articles indicating that concrete buildings are more cost effective than conventional wood frame.

Many clients have been asking us for an estimate price for Quad-

Lock construction system, **Avila Engineering & Construction** has collected data from many jobs and proposals and has determined that in the case of Quad-Lock walls, the cost will depend on

the selection of reinforcement steel, the thickness of the concrete wall and the panels, the confidence of the structural engineer regarding the design of bearing walls and the crew experience on productivity and use of this construction system.

In the case of elevated slab or decks the cost will rely on the span, the thickness of the slab, the rebar design, safety considerations, crew experience, level of confidence on the technology.

In conclusion, AE&C suggests that a Quad-lock wall average cost is around **\$14.74 per square foot**. This estimate includes Quad-Lock material and accessories, 3000 psi concrete, rebar, labor, bracing, concrete pumps, general conditions and profit.

In the case of the decks, our average price has been calculated on **\$16.25 per square foot of slab** again, this Avila Engineering & Construction’s price includes Quad-Deck material and accessories, 3000 psi concrete, rebar, labor, shoring, concrete pumps, general administration and earnings.

It is important to highlight that these are direct costs. Many contractors could say that these prices are too high but the benefits appear when we add in the comparison the columns/cells, beams, and the activities to fur, and insulate conventional wall, add to these indirect costs that are much less in Quad-Lock system.

CMU Wall-Load Bearing Wall (solid CMU)			QUADLOCK		
CMU Wall-Load Bearing Wall (solid CMU)	\$ 12.00	SF	ICF Load Bearing Wall-Solid 6" Core	\$ 14.74	SF
Insulation-1" thick R6.67	\$ 2.00	SF	R22 Insulation	\$ -	SF
1-1/2" Mtl. Furring 16" o/c	\$ 3.14	SF	1-1/2" Mtl. Furring 16" o/c	\$ -	SF
5/8" Drywall	\$ 1.10	SF	5/8" Drywall	\$ 1.10	SF
Tape & Finish	\$ 0.72	SF	Tape & Finish	\$ 0.72	SF
Interior Paint	\$ 0.49	SF	Interior Paint	\$ 0.49	SF
Stucco Finish	\$ 5.00	SF	Stucco Finish	\$ 5.00	SF
Exterior Paint	\$ 0.95	SF	Exterior Paint	\$ 0.95	SF
TOTAL COST (CMU)	\$25.40	SF	TOTAL COST (ICF)	\$23.00	SF

Saving 9%

This cost reduction is direct construction saving only, however, does not compare the benefits of not having, columns, tie-beams and the saving in Mechanical (A/C) equipment.

Avila Engineering & Construction – Latest Jobs

Our company (AE&C) has grown a lot in the last six months and now is expanding operation of the Construction Division to the Southwest Florida and has developed a Home and Commercial Renovation division that covers Broward and Palm Beach Counties.

During this year AE&C done several residential renovation projects among them bathroom renovations, kitchen update, rooms upgrading.



Avila Engineering & Construction – Quad-Lock Pictures

Quad-Lock House in construction in Pompano Beach.

