PCI MIDWEST
A Chapter of Precast/Prestressed Concrete Institute

PRECAST FOCUS

HOW PRECAST BUILDS: ARCHITECTS, ENGINEERS, CONTRACTORS, OWNERS, AND DEVELOPERS

Precast concrete construction is the top solution of choice for architects, engineers, contractors, owners, and developers for versatile, efficient, resilient, and sustainable high-performance structures. For architects, working with precast concrete allows the aesthetic versatility to incorporate a variety of colors, forms, textures, and finishes making each architectural precast concrete project a custom fit. All that aesthetic versatility is accompanied by a barrier wall system that also provides continuous insulation, air, and vapor barrier all in one highly efficient enclosure system. In many cases, precast concrete enclosure systems can also be incorporated as part of the load-bearing structural system, thereby reducing redundancy, and increasing usable floor space.

For structural engineers, working with precast concrete offers design versatility with many economical component sections, load-bearing envelopes, and long open spans with fewer columns. With precast concrete, engineers can create a structure that can be easily and economically adapted as needed during decades of service. This adaptive reuse creates value for owners who often specify a 100-year service life for their buildings. Precast concrete also provides engineers with designs that have inherent functional resilience, durability, and storm, earthquake, blast, and passive fire resistance.

Contractors, owners, and developers also benefit from precast concrete's attributes. Contractors enjoy minimal site disturbance because precast concrete products are manufactured offsite and delivered just-in-time for installation. With precast concrete there is negligible waste on the job site, accelerated construction schedules, reduced detailing and trades on the job site, and enhanced profitability.

Owners and developers benefit from the use precast with deconstructive and adaptive reuse, thermal energy and operational efficiency, low life-cycle costs, 100-year service life, and resilient multi-hazard protection from storms, floods, earthquakes, blasts, and fires. Column-free space allows flexibility in floor plans and office layouts. Shallow floor thicknesses with fewer beams provide open ceiling spaces for mechanical and electrical systems.

Precast concrete structures provide for life safety and health with superior indoor environmental air quality, passive fire protection, no VOCs, no mold, fast enclosure, sound insulation, multi-hazard protection from storms, floods, earthquakes, and blasts, while meeting all FEMA P-361 criteria for safe rooms. Precast concrete is a durable, resilient, flexible, and sustainable building material for all types of structures. Consider high-performance precast concrete for your next building project and ensure safety, efficiency, flexibility, and functionality for your occupants for decades to come.

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