



Benefits and Attributes of Precast Concrete Systems

Precast concrete is a high performance material that integrates easily with other systems and inherently provides the versatility, efficiency, resiliency, and durability needed to meet the multi-hazard requirements and long-term demands of high performance structures.

Precast concrete consists of a specialized concrete mix which is cast into project specific customized panels at an offsite plant. The concrete is placed into a mold or form, and cured before being removed from the form. The precast components are then transported to the project site for erection. This prefabrication process allows all pieces to be cast in a controlled environment and erected on site, creating one of the quickest and most efficient building systems available.

Choosing precast concrete during the design build process can provide a multitude of architectural, construction, and design benefits. Whether you are designing commercial structures, residential structures, parking garages, bridges, or another type of structure, consider precast concrete as your building material of choice.

Precast is Versatile, Efficient, and Resilient

VERSATILE	EFFICIENT	RESILIENT
Aesthetic Versatility	Site Efficiency	Structure Durability
Virtually any color, form, and texture	Minimal site disturbance	Long service life
Facade integration	Negligible waste	Barrier wall system
Historic compatibility	Accelerated construction	Functional resilience
Structural Versatility	Energy and Operational Efficiency	Multi-Hazard Protection
Load-bearing envelopes	Scalable performance	Storm resistance
Economical sections	Thermally efficient	Earthquake resistance
Long open spans	Low life-cycle costs	Blast resistance
Use Versatility	Risk Reduction	Life Safety and Health
Recyclables	Design assist	Indoor environmental quality
Deconstructive reuse	Reduced and trades	Passive fire resistance
Adaptive reuse	Enhanced profitability	Meets FEMA 361

Stresscon Corporation, an EnCon Company, is a specialty contractor providing engineered concrete products and services for the construction communities of Colorado and the Rocky Mountains. Serving the building industry for over 45 years, Stresscon Corporation is a full service specialty contractor providing engineered precast prestressed concrete building solutions. Stresscon strives to provide precast building solutions to the construction market. Stresscon also maintains an in-house design team of licensed engineers and designers that provide valuable preconstruction design assistance.





Benefits and Attributes of Precast Concrete Systems

Versatility

Precast concrete provides excellent versatility in aesthetics, structural design, and architectural benefits. Precast can be utilized as the primary structural system saving material, time, and money. Precast concrete can also provide greater open spans by reducing the number of interior columns thereby increasing flexibility in the use of the floor space.

- Specialized engineering to meet unique business goals and facility requirements
- Project customization with design creativity and solutions, and unlimited design options
- Precast concrete provides a number of architectural benefits. It comes in almost any color, form and texture, and can also be veneered or embedded with natural materials.
- Unique visual elements
- Adaptable designs for structural stability create a single, fully integrated building system
- Vast array of options for size, pattern, shapes and insets

Efficiency

Precast concrete provides efficiency in use of materials, construction, and operation. Precast concrete is the fastest building system available, and minimizes negative effects at the project site. Precast also provides a very thermally efficient and almost maintenance free envelope that helps reduce overall life-cycle costs.

- Acoustical control
- Vibration control reduces sound transmission
- Installation requirements are ideal for small footprint, infill sites, and zero lot line conditions
- Precast can be fabricated and erected in a wide array of environmental and weather related conditions
- Precast concrete has been used in a variety of projects focused on sustainable design due in part to its efficiency benefits
- LEED Documentation support
- LEED product benefits including recycled content and LCA, EPD, and NAPCSPP documentation

Resiliency

Precast inherently provides a high level of resiliency which protects against multiple hazards such as fire, storms, explosions, and even earthquakes. Precast also does not contain any VOCs or provide a food source for mold which helps maintain a healthy indoor environment. It is also a great sound insulator and can help maintain more uniform indoor temperatures thereby improving occupant comfort.

- Inherently fireproofed
- Factory precast/prestressed concrete typically attains high-compressive strength of 5,000 psi and beyond
- Meets hazard requirements for specialized structures
- Corrosion, staining, discoloration, and surface decay resistance
- Meets high performance goals and requirements
- Plant cast environment
- High quality product and plant fabrication control, and PCI certified quality control and certification processes
- Precast components ensure a long life cycle, low life cycle costs, and virtually no maintenance

