



NPCCA

National Precast Concrete Association

precast.org

PRECAST
CONCRETE
WALL PANELS

INTRODUCTION



- **Introductions**
- **Design Flexibility of Wall Panels**
- **Benefits of Precast**
- **Conclusion**

DESIGN FLEXIBILITY

Limited Only by Your Imagination

- Aesthetics, cost and speed of installation – pick any two. That's the usual choice owners and architects face when considering building materials for their construction projects.
- Precast concrete wall panels, however, make all of these available by offering design flexibility, time savings and improved profitability.

DESIGN FLEXIBILITY

Limited Only by Your Imagination

- Nearly everywhere you look, new office buildings, hospitals, schools, parking garages, shopping centers and apartments are taking shape as cities continue to expand.
- These and other structures look fantastic clad in precast concrete wall panels, which offer a limitless variety of shapes, styles and colors.

BENEFITS OF PRECAST

Aesthetically Pleasing

- Precast panels can be produced in virtually any color and a wide variety of finishes to achieve the desired appearance.



BENEFITS OF PRECAST

Aesthetically Pleasing

Finishes commonly available are:

- Smooth-as-cast
- Textured form liner
- Exposed aggregate
- Sand blast
- Acid etch



BENEFITS OF PRECAST

Superior Strength and Durability

- Strength gradually increases over time.
- Exterior cladding panels can easily be designed to handle structural building loads, thereby reducing the need for other structural components.
- Does not deteriorate, experience creep and stress relaxation, lose strength and/or deflect over time.

BENEFITS OF PRECAST

Safety and Protection

- Precast concrete provides excellent protection against impacts from explosions, vehicles and projectiles.
- Precast concrete wall panels have passed tornado/hurricane impact testing, giving owners an added level of safety assurance in areas prone to severe weather.

BENEFITS OF PRECAST

Ease of Installation

- Precast concrete panels have a distinct advantage over other materials such as brick, concrete masonry, cast-in-place concrete and EIFS.
- Because precast panels are manufactured well in advance of installation, they are ready for transportation to the job site at a moment's notice.



BENEFITS OF PRECAST

Ease of Installation

- Most panels include embedded connections hardware so they can be erected onto a steel frame quickly with a limited installation crew.
- Projects utilizing precast can save weeks or months over other materials.



BENEFITS OF PRECAST

Consistent Quality

- Because precast concrete products are typically produced in a controlled plant environment, they exhibit high quality and uniformity.
- Problems affecting quality typically found on a job site – temperature, curing conditions, craftsmanship and material quality – are nearly eliminated in a plant environment.

BENEFITS OF PRECAST

Reduced Weather Dependency

- Precast concrete increases operating efficiency, because weather will not delay production.
- Weather conditions have a reduced effect on the schedule because precast requires less time to install than alternative methods such as cast-in-place and EIFS.

BENEFITS OF PRECAST

Environmentally Friendly

- Besides water, concrete is the most frequently used material on earth.
- It is nontoxic, environmentally safe and composed of natural materials.



BENEFITS OF PRECAST

Weather and UV Resistance

- Precast concrete is well-suited for all types of weather conditions.
- In regions with regular freeze-thaw cycles, the mix can be designed to withstand damage.
- Precast concrete does not degrade from exposure to sunlight.

BENEFITS OF PRECAST

Energy Savings

- Precast concrete has excellent R-value insulation properties, which can be enhanced with embedded Styrofoam (sandwich panels).



BENEFITS OF PRECAST

Modularity

- Because of the modular nature of precast concrete products, buildings of nearly any size can be accommodated.
- Precast products are designed and manufactured for simple connection to reduce installation time.



BENEFITS OF PRECAST

Availability

- With hundreds of manufacturers throughout North America, precast concrete wall panels can be ordered from most cities and regions.
- Products are made in advance and readily available when needed at the job site.
- Ensures a competitive market and a ready supply.

BENEFITS OF PRECAST

Efficiency

- Precast products arrive at the job site ready to install.
- No waste in the time schedule for cast-in-place work, laying of masonry products or EIFS installation.



BENEFITS OF PRECAST

Low Maintenance

- Precast concrete requires little or no maintenance, which makes it the ideal choice for nearly any design solution.
- Other products, such as EIFS, may require repair after severe weather or impact.

BENEFITS OF PRECAST



Economical

- Precast concrete wall panels offer lower long-term costs when compared with other materials.
- Ease of installation, reduction in overall project timeline and total flexibility in design make precast the economical solution.

CONCLUSION

- Precast concrete is the material of choice for the cladding of buildings and parking structures.

